



AIR CAMPAIGN

GUADALCANAL 1942-43

Japan's bid to knock out Henderson
Field and the Cactus Air Force

MARK STILLE | ILLUSTRATED BY JIM LAURIER



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CONTENTS

INTRODUCTION	4
CHRONOLOGY	9
ATTACKER'S CAPABILITIES	11
DEFENDERS' CAPABILITIES	18
CAMPAIGN OBJECTIVES	34
THE CAMPAIGN	42
ANALYSIS AND CONCLUSION	90
BIBLIOGRAPHY	94
INDEX	95



INTRODUCTION

The Grumman F4F Wildcat was the outstanding aircraft of the Guadalcanal campaign. Though supposedly outclassed by its Japanese counterpart the "Zero" fighter, the Wildcat more than held its own when it was flown using tactics to maximize its strengths. (Official Marine Corps photo courtesy of Marine Corps History Division)

While the battle of Midway fought between June 4 and 6, 1942 is usually viewed as the single most decisive battle of the Pacific War between Japan and the United States, the campaign for Guadalcanal between August 1942 and February 1943 was much more decisive. Not only did it subject the Imperial Japanese Army (IJA) and Navy (IJN) to a six-month grinding battle of attrition which the IJN in particular could not afford, but it proved that, even under what were strategically advantageous circumstances, the Japanese were unable to stop the American offensive in the Pacific. The campaign for Guadalcanal was a bitter contest in which ground, naval, and air forces were locked into an interrelated struggle. In what became the pattern for the rest of the war, air power was the deciding factor in this campaign. The airfield on Guadalcanal became the fulcrum for the entire battle and American ground, naval, and air forces were focused on holding the airfield and keeping it operational. Despite their numerical advantages, the Japanese were never able to mass their forces to seize Henderson Field or to knock it out of action for a prolonged period. Possession of the airfield gave the United States the margin of victory in the campaign and opened the door on the long road to Tokyo.

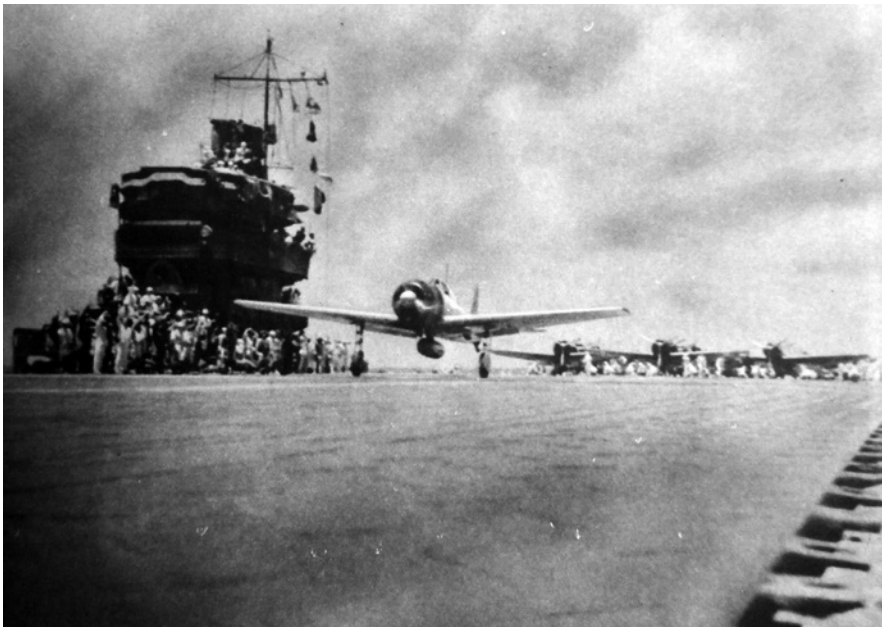
Japanese expansion in the South Pacific

The Japanese opened the Pacific War with attacks in many areas to secure the objectives laid out in their First Operational Phase. The principal objectives in the opening phase of the war included the Philippines, Malaya, the Dutch East Indies, Burma, and Rabaul on the island of New Britain in the South Pacific. All except the Philippines were occupied on schedule or earlier. In January 1942, the Japanese occupied Rabaul against minimal Australian resistance. Rabaul possessed a large natural harbor and several airfields and quickly became the principal Japanese facility in the South Pacific. To the Americans, Rabaul was a threat as it was the potential base for further Japanese expansion in the South Pacific. In particular, the Americans were concerned about the threat to the sea line of communications (SLOCs) from the United States to Australia.

All of Japan's First Operational Phase objectives were captured by May 1942 with the surrender of the last American forces in the Philippines. In the Second Operational Phase, the Japanese sought to create strategic depth for their new possessions. The Aleutian Islands in the North Pacific and Midway Atoll in the Central Pacific were potential targets, but the South Pacific was the area of most future expansion. Potential targets in the region included eastern New Guinea, the Fijis, Samoa, and "strategic points in the Australian area." This was a very ambitious list and was beyond the means of Japanese forces and the shipping required to support them. The problem of inadequate forces and shipping was even more pronounced when simultaneous operations in the Central and South Pacific were considered. The Japanese had no choice but to sequence their operations.

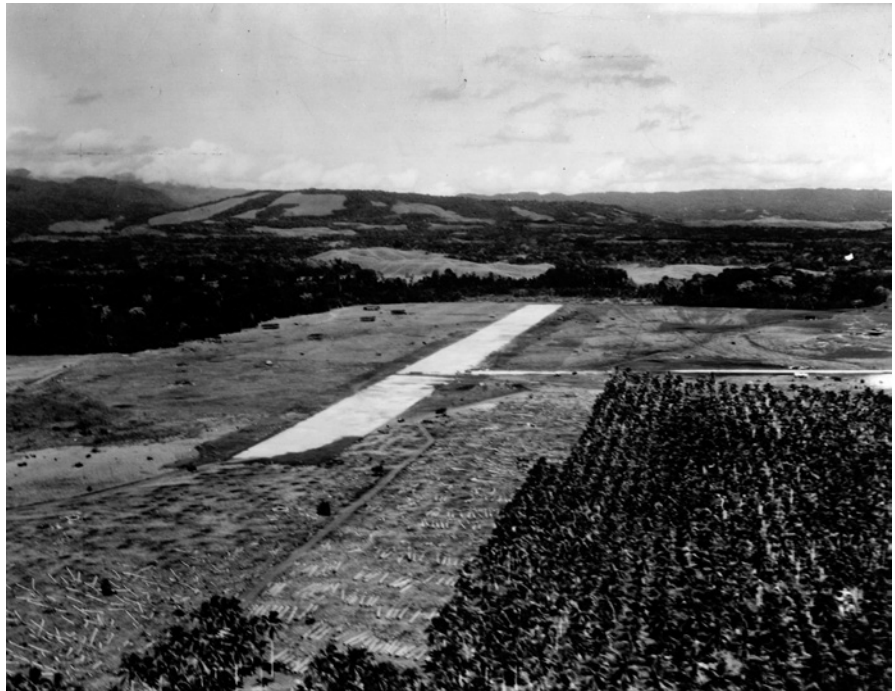
There were differences within the IJN about how best to proceed and the IJA refused to write a blank check for potential expansion in the South Pacific since it had higher priorities for committing its forces. Within the Imperial Navy, the Commander of the Combined Fleet, Fleet Admiral Yamamoto Isoroku, wanted to give the Central Pacific attack priority. He planned an attack against Midway Atoll to draw out the remaining units of the US Pacific Fleet where they would be destroyed. The Naval General Staff preferred an immediate advance into the South Pacific to cut the SLOCs between the United States and Australia. The IJA largely left the direction of strategy in the Pacific up to the IJN, but it made clear that the commitment of large ground forces was impossible. This precluded an attack on Australia, but operations against South Pacific islands were still possible.

In early April, the Naval General Staff and the Combined Fleet came to an agreement on the phasing of future operations. Just as he had during the debate over his Pearl Harbor operation, Yamamoto used the threat of resignation to get his Midway plan approved. However, the price of this approval was a compromise plan in which the Combined Fleet would conduct a set of tightly sequenced operations in the South Pacific in early May followed by the main operation against Midway and the Aleutians in early June. The offensive operations in May included an amphibious operation to seize Port Moresby on New Guinea and the occupation of Tulagi Island in the southern Solomons. This



The Zero built a formidable reputation early in the war against weak Allied resistance. This is a Zero aboard an IJN carrier during the battle of Santa Cruz in October 1942. Against the principal USN and Marine fighter of the period, the F4F Wildcat, the significant weaknesses of the Zero were exposed. (IJN/Public domain)

Henderson Field pictured before its capture by the Marines. The runway is unfinished and its austere nature is evident from the lack of supporting infrastructure. The high ground at the center of the image is the spot where both major Japanese attacks to capture the airfield were made. Beyond that is Mount Austen where Japanese observers were emplaced after the Marines captured the airfield. (Official Marine Corps photo courtesy of Marine Corps History Division)



was a major operation with some 60 ships covered by land-based air units from Rabaul. Because the United States Navy (USN) had opposed the Japanese landings in March at Lae and Salamaua on New Guinea with carriers, the Port Moresby operation required the participation of the Combined Fleet's main carrier force in case the USN tried to intervene again with carriers. Accordingly, Yamamoto committed two of his fleet carriers and a light carrier to support the operation.

Such a large operation did not escape the notice of USN intelligence, which had the priceless advantage of being able to break a limited percentage of Japanese naval code traffic. Admiral Chester Nimitz, Commander-in-Chief (C-in-C) of the Pacific Fleet, committed two carrier groups to defeat the invasion. This resulted in the battle of the Coral Sea on May 7–8, 1942. Not only was this history's first carrier battle, but it was also the first strategic Japanese defeat of the war. When the carrier battle placed all three Japanese carriers present out of action (one being sunk, another damaged, and the third had its air group severely reduced), the lack of air cover for the invasion of Port Moresby forced the cancelation of the entire operation. The seeds for the Guadalcanal campaign were sown in the Port Moresby operation. During the first phase of the Japanese operation the island of Tulagi was occupied on May 3 for use as a seaplane base. This first foothold in the southern Solomons gave strategic depth to the defense of Rabaul located some 560 miles to the northwest.

The Port Moresby debacle, which removed three carriers from Yamamoto's order of battle just before his decisive operation against the USN, did not stop the much larger operation against Midway and the Aleutians. The reduction of the Combined Fleet's carrier force, in addition to incredibly sloppy planning on every level, resulted in the crippling defeat at Midway when, on June 4, four Japanese fleet carriers were sunk or disabled. The loss of the fleet carriers impacted Japanese plans in the South Pacific. With their offensive power blunted, Japanese operations to occupy New Caledonia, the Fijis, and Samoa were postponed on June 11 and canceled forever in July. The only Japanese offensive operations remaining in the South Pacific were against Port Moresby. The failure of the seaborne attack forced

the Japanese to mount an overland attack over very difficult terrain. This operation was controlled by the Imperial Army's 17th Army based in Rabaul.

Since Tulagi was not big enough to support an airfield, the Japanese looked for alternatives. Only 20 miles to the south was a largely unknown island named Guadalcanal. On June 13, the Japanese decided to build an airfield on the northern coast of Guadalcanal. Soon thereafter on July 6, a 12-ship convoy arrived off Lunga Point on Guadalcanal with two Imperial Navy construction units. Work began immediately and the airfield was planned to be completed in August. This activity was soon detected by the Americans and immediately recognized as a threat since long-range aircraft based on Guadalcanal could threaten Allied supply lines to Australia.

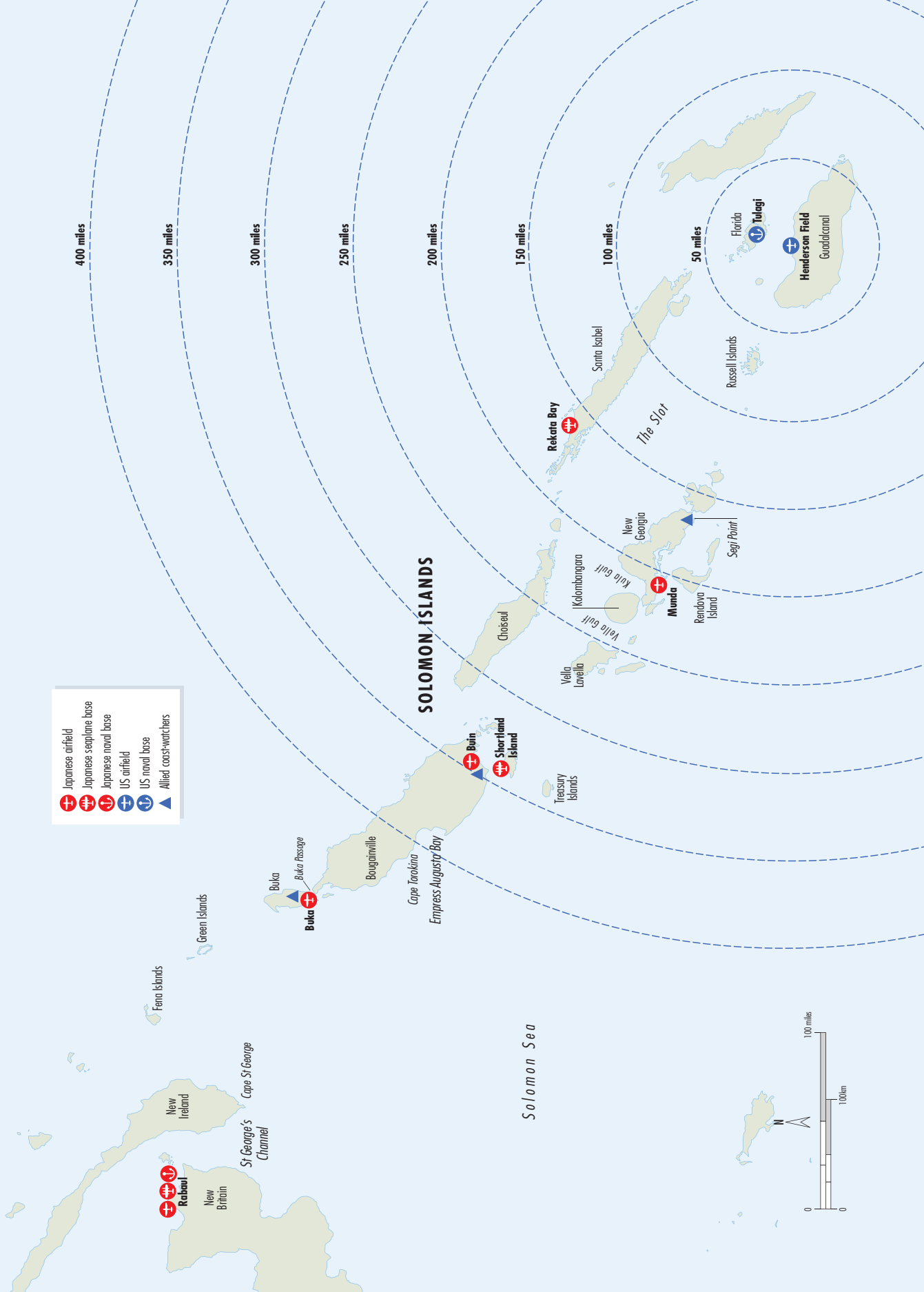
The United States and the South Pacific

While the Japanese had assumed a defensive posture in the South Pacific, the Americans had other ideas. Admiral Ernest King, Commander-in-Chief US Fleet, was closely monitoring any threats to the SLOCs to Australia. When Nimitz assumed his new position on December 31, 1941 King instructed him that his priorities were to hold Hawaii and Midway in the Central Pacific, followed closely by the requirement to protect the sea lanes to Australia. This required a serious investment of scarce ground and air resources, since a series of islands in the South Pacific as far west as the Fiji Islands and the New Hebrides had to be properly garrisoned against a potential Japanese attack. The Japanese occupation of Rabaul was seen as just the first Japanese advance in the South Pacific. Further advances south against Fiji and New Caledonia looked likely. This had the result of making it easier for King and Nimitz to get additional forces for the defense of the SLOCs and it also reinforced King's conviction that he could not be passive in the South Pacific.

Even though the grand strategy of the United States was to remain defensive in the Pacific in order to prosecute the war against Germany more fully, King did not think that this precluded him from offensive operations in the South Pacific. King admitted as early as March 1942 that he had no intention of remaining strictly defensive in the South Pacific. His vision was an offensive from the New Hebrides into the Solomon Islands and eventually the Bismarck Archipelago, with the eventual goal of retaking Rabaul. In the aftermath of the Japanese defeat at Midway, King saw a chance to implement his aggressive plan. While the Japanese were undecided what to do after Midway, King moved quickly to seize the initiative. On June 24, King ordered Nimitz to come up with a plan to capture Tulagi and nearby islands. This was temporarily derailed by existing command jurisdictions in the South Pacific since the southern Solomons were in the Southwest Pacific Area command under Army General Douglas MacArthur. King categorically refused to consider that a primarily naval operation would be conducted under MacArthur's direction. Accordingly, by July 2 an arrangement was made between King and Army Chief of Staff General George Marshall to move the command line to the west, which placed the southern Solomons in the South Pacific

The Marine Douglas SBD Dauntlesses in this view are taxiing from their dispersal area in preparation for a strike or reconnaissance mission from Henderson Field. Even the small number of strike aircraft operating from Guadalcanal had strategic implications for both sides during the Guadalcanal campaign. (Official Marine Corps photo courtesy of Marine Corps History Division)





OPPOSITE: THE SOLOMON ISLANDS, AUGUST 1942—JANUARY 1943

Area under Navy control. King wanted the offensive to commence by August 1 in order to exploit the victory at Midway. As the pace of planning accelerated, American intelligence assessed that Japanese construction troops were on Guadalcanal; the island was added as an objective on July 5. The entire operation was given the codename *Watchtower*. The codename for Guadalcanal was *Cactus*.

The bulk of the Pacific Fleet's fighting strength, including three of its four carriers, was allocated to the operation. The principal ground unit earmarked was the 1st Marine Division. By June, most of the division was in Wellington, New Zealand and on June 26 the division's leadership was told of its role in the offensive against Tulagi and Guadalcanal. The ground part of Operation *Watchtower* was commanded by Major General Alexander Vandegrift, commander of the 1st Marine Division and later the South Pacific Marine Provisional Corps. This formation included any Marine air units and later any Army and Navy air units based on Guadalcanal. Because his command was spread out, Vandegrift requested a short delay to launch the attack. This was granted and the new invasion date was set as August 7. On July 31, the Marines departed the peaceful waters of the Fijis, where they had conducted a messy rehearsal, and headed for the Solomons. Much of the logistical preparations for the operation were incomplete, but the first American offensive of the war was under way.

The expeditionary force was commanded by Vice Admiral Frank Fletcher. Air cover for the invasion was provided by Fletcher's three carriers, but the admiral was wary of exposing his carriers to land-based air attack from Rabaul for an extended period. The key to victory was to get the almost-completed airfield on Guadalcanal operational so it could support Marine aircraft. Once supported by their own aircraft, the Marines would be in a good position to defeat any Japanese counterattack and Fletcher's carriers could be released from a direct support role. Neither side foresaw that Guadalcanal was to become the focal point of the decisive battle of the Pacific War and neither side accurately predicted how the battle was going to be fought. In the first weeks of the campaign, each side quickly understood that the airfield on Guadalcanal was the key to victory and made every attempt to bring it under its control.

CHRONOLOGY

1942

May 3 Japanese seize Tulagi Island in southern Solomons

June 24 King directs Nimitz to plan for capture of Tulagi and adjacent islands

July 5 Guadalcanal added to American list of targets

July 6 Japanese begin work on airfield on Guadalcanal

August 7 Americans land on Guadalcanal against minimal resistance

August 8 Uncompleted airfield on Guadalcanal captured; Japanese air attack from Rabaul on the invasion fleet is defeated with heavy Japanese losses

August 9 Battle of Savo Island results in a severe Allied naval defeat

August 12 Guadalcanal airfield completed and named Henderson Field by the Marines

August 20 First Marine aircraft arrive on Guadalcanal

August 20–21 Battle of the Tenaru River; first Japanese attempt to seize Henderson Field is repulsed

August 21 First dogfight between Marine and Japanese fighters results in a defeat for the Americans; first USAAF aircraft arrive on Guadalcanal

August 24–25 Battle of the Eastern Solomons; Cactus Air Force aircraft attacks a Japanese reinforcement convoy, forcing it to turn back

August 28 Cactus Air Force attacks the “Tokyo Express” and sinks one destroyer and damages two more

August 30 First major Marine air reinforcements arrive on Guadalcanal

September 11 First Navy fighter squadron arrives on Guadalcanal

September 12–14 Second Japanese ground attack to capture Henderson Field fails

September 14–26 Lull in Japanese raids on Henderson Field; Japanese land-based air units heavily reinforced; losses during first two weeks of September total 34 for the Japanese and 42 for the Cactus Air Force

September 28 Large Japanese raid on Henderson Field defeated for second day in a row with heavy Japanese bomber losses

October 3 Japanese air attack defeated with heavy losses forcing a cessation of air attacks for several days

October 9 Third Marine fighter squadron arrives on Guadalcanal

October 11–12 Battle of Cape Esperance results in a Japanese naval defeat but the Japanese build-up for an October ground attack continues in full swing

October 12 Cactus Air Force sinks two Japanese destroyers

October 13–14 Two Japanese battleships bombard and temporarily neutralize Henderson Field

October 15 Japanese “High-Speed” reinforcement convoy arrives on Guadalcanal; three of six transports sunk by air attack but 4,500 troops land

October 16 Fourth Marine fighter squadron arrives on Guadalcanal

October 18 Ghormley relieved by Halsey

October 24–26 Third Japanese ground attack to seize Henderson Field fails

October 26 Battle of Santa Cruz; Japanese gain major victory leaving one USN carrier operational in the South Pacific

November 13 First Naval Battle of Guadalcanal; Americans suffer heavy losses but turn back Japanese attempt to bombard Henderson Field with battleships

November 14–15 American aircraft sink all but one of 11 Japanese transports in a convoy bound for Guadalcanal

November 14–15 Second Naval Battle of Guadalcanal; USN defeats another Japanese attempt to conduct a battleship bombardment of Henderson Field

December 11 Last Japanese destroyer run to Guadalcanal in 1942; Japanese garrison reduced to starvation rations

December 26 Imperial Army and Navy agree to withdraw from Guadalcanal

December 31 Emperor approves evacuation plans

1943

February 1 First Japanese evacuation run to Guadalcanal picks up 4,935 personnel

February 4 Second evacuation run picks up another 3,921 personnel

February 7 Last evacuation run picks up final 1,972 personnel

February 9 Organized Japanese resistance on Guadalcanal ends



ATTACKER'S CAPABILITIES

The Emperor's air power

The IJN began the war with the world's largest and most powerful naval air force. In addition to its large carrier-based air force, the IJN was unique in that it possessed a large and balanced land-based air force with fighter, long-range bomber, and reconnaissance units. This force showed its capabilities early in the war, taking a leading role in operations against American forces in the Philippines, British forces in Malaya and Singapore, and Allied forces in the Dutch East Indies. It had seen brief action against American forces at Wake Island and other Pacific Islands during USN carrier raids in January–February 1942 but had not seen serious combat against American land-based air forces. Now the IJN's Air Force was called on to play a leading role to crush American air power in the Solomons.

Aircraft units

The 11th Air Fleet under Vice Admiral Tsukahara Nishizo was the IJN's principal land-based aviation command. Tsukahara was a 1908 graduate from the IJN's Naval Academy at Eta Jima. He was not an aviator but had held several naval aviation billets including command of an aircraft carrier. He took command of the 11th Air Fleet in October 1941 and led it through its string of early-war successes. In August, he fell sick to malaria and then dengue fever. On October 8, Yamamoto replaced him with Vice Admiral Kusaka Jinichi, who was pulled from his job as Commandant at Eta Jima. He also was not a naval aviator and had little background in aviation but was considered an aggressive commander. He ended the war as commander of all naval forces in the Rabaul and Solomons area and signed the surrender of these forces in September 1945.

The 11th Air Fleet was broken down into several air flotillas. The 25th Air Flotilla was the formation assigned to conduct operations in the Bismarck Archipelago and eastern New Guinea. Its primary bases were at Rabaul on New Britain and Lae on New Guinea. It had

The Mitsubishi F1M2 Navy Type 0 Observation Seaplane Model 11 saw extensive service during the Guadalcanal campaign as part of the R Area Air Force. Not only did the aircraft conduct night harassment missions over Guadalcanal, it was also used in a convoy escort role to protect Tokyo Express missions. Used as a fighter it was limited by a weak armament of two forward-firing 7.7mm machine guns and a rear firing 7.7mm machine gun and a top speed of 200 knots. It was supremely maneuverable but was totally outclassed by a Wildcat. (US Navy National Museum of Naval Aviation)

**ABOVE LEFT**

Japanese operations in the Guadalcanal area were under the overall direction of Admiral Yamamoto, C-in-C of the Combined Fleet. He was caught off guard by the American offensive into the Solomons in August 1942 and never regained his balance. Yamamoto failed to synchronize the advantages he had in both surface and air forces and mismanaged the campaign throughout. (Naval History and Heritage Command)

ABOVE RIGHT

Vice Admiral Tsukahara was CO of the 11th Air Fleet. When the Americans landed on Guadalcanal, he moved from Tinian to Rabaul to take command of the Japanese air forces in the South Pacific. Even though the 11th Air Fleet was numerically superior to the Cactus Air Force, he was never able to make the IJN's land-based air forces a decisive component of Yamamoto's counterattack to retake Guadalcanal. (Naval History and Heritage Command)



forward operating bases at Tulagi for seaplanes and at Buna on New Guinea. It was the 25th Air Flotilla which was preparing to occupy the new airfield on Guadalcanal.

The 25th Air Flotilla was established in April and had been in constant action against United States Army Air Force (USAAF) and Royal Australian Air Force (RAAF) units over New Guinea since then. As a result, the unit was under-strength. It was still formidable since it combined modern aircraft with very well-trained aircrew.

An IJN air flotilla was broken down into a variable number of air groups. Each air group comprised between three and six *chutai*, each with nine aircraft. The 25th Air Flotilla's long-range bomber air group was the 4th. It was authorized 48 bombers but had only 32 on hand on August 7 when the Americans landed on Guadalcanal. That afternoon, the first nine of 32 bombers from the Misawa Air Groups arrived at Rabaul.

The 25th Air Flotilla's fighter unit was the famed Tinian Air Group. This was the IJN's premier fighter unit with the IJN's three top fighter aces (Sakai Saburo, Nishizawa Hiroyoshi, and Ota Toshio). The Tinian Air Group had swept the skies of Allied aircraft over the Philippines, Malaya, and the Dutch East Indies. It was authorized 69 fighters but possessed only 24 on August 7. Because of this aircraft shortage, it used six- rather than nine-plane *chutais* and it had many more pilots, almost all veterans, than aircraft. A small number of long-range reconnaissance aircraft were also assigned to this air group.

The 3rd Air Group was composed of 15 short-range fighters and 16 dive-bombers. None of these aircraft had the range to fly from Rabaul to Guadalcanal without refueling so were of limited use unless the Japanese could build bases closer to Guadalcanal. The fighters were used for base defense at Rabaul.

The Yokohama Air Group operated a collection of long-range flying boats and float fighters. Most were based on Tulagi and were destroyed in the first hours of the campaign. IJN flying boat units did outstanding work during the campaign locating USN naval forces but were not directly involved in the battles over Guadalcanal.

Aircraft

Only two different aircraft types shared the burden of conducting the Japanese campaign to destroy American air power at Guadalcanal. These were the Mitsubishi G4M1 Navy Type 1 Attack Bomber Model 11, which was the IJN's mainstay long-range bomber for most of the war, and the Mitsubishi A6M2 Model 21 Type 0 Carrier Fighter, which also served for the entire war as the IJN's principal fighter. Though their Allied reporting names were not in use during the Guadalcanal campaign, the bomber became known later in the war as the "Betty" and the ubiquitous fighter became known as the "Zeke" or more commonly as the "Zero." Both will be referred to by their Allied reporting names for the remainder of the book.

The Betty was the IJN's principal bomber having replaced the earlier G3M "Nell" long-range bomber. The Betty was an impressive machine, but it did possess a significant weakness. The aircraft was built as a long-range strike aircraft to support the IJN's concept of attacking and attriting USN fleet units at extended ranges. It could carry torpedoes to attack maritime targets or bombs to attack either land or sea targets. The Betty's payload was a modest 1,760lb, which proved to be a disadvantage. The aircraft possessed a long range of 1,540nm, meaning that it could easily reach Guadalcanal from Rabaul. It was also relatively fast with a top speed of 231 knots at 13,800 feet. It carried four machine guns and a 20mm gun in the tail for self-protection. However, its extended range capabilities were gained at the expense of armor protection for the crew and self-sealing gas tanks. The aircraft carried 1,294 gallons of fuel in the wings, and when these were hit the result was usually a fireball. The aircraft's reputation for turning into a flying ball of fire prompted its crews to call it the "Type One Lighter" and the "Flying Cigar."

Protecting the vulnerable Bettys and tasked to gain control of the airspace over Guadalcanal was the famous Zero. The aircraft was the product of the brilliant designer Jiro Horikoshi. By incorporating several new features, he was able to meet the IJN's specifications for an aircraft capable of great range, high speed, and still able to meet the Japanese penchant for maneuverability. With a drop tank, it had a range of 1,200 miles, which made it capable of flying from Rabaul and operating over Guadalcanal. It must be remembered that the Zero had to carry external fuel tanks to make it to Guadalcanal and back. These tanks could not be dropped which meant that the aircraft could not maneuver at full speed for fear of ripping the tanks off. Even with tanks, the Zeros had only enough fuel for a few minutes of air combat over Guadalcanal. Against the principal American fighter of the campaign, the Grumman F4F Wildcat, the Zero was more maneuverable, possessed superior climb and acceleration, and was slightly faster (top speed 288 knots at 14,764 feet). However, as with the Betty, the Zero had a fatal weakness. Because of the requirement for great range, the Zero had to be light. The designer accomplished this at the expense of protective armor and self-sealing fuel tanks. This made the Zero highly susceptible to battle damage. Another method to reduce weight was to remove the radios from the Zero. Japanese radios were unreliable, and pilots removed them to save weight. This also impacted the Zero's combat effectiveness.



Vice Admiral Kusaka Jinichi took over command of the 11th Air Fleet on October 8. Despite a reputation for aggressiveness, he was equally unable to neutralize the Cactus Air Force using Japanese land-based air power. (Naval History and Heritage Command)

OPPOSITE: JAPANESE RAID PROFILES

The Zero was indifferently armed with two rifle-caliber machine guns and two wing-mounted slow-firing 20mm cannons.

Weapons

The Betty bomber carried a relatively small bomb load of 1,760lb. This equated to a typical load of two 550lb and six 132lb bombs. This meant that a typical formation of 18 Bettys carried only 36 large bombs, not enough to saturate a target as large as Henderson Field. Since the bombers were dropping from 25,000 feet or more to avoid anti-aircraft fire from the 90mm guns emplaced around the airfield, it was far from certain that even this small number of bombs would hit their target. The No.25 550lb Land Bombs contained 330lb of explosives. In the soft earth of Henderson Field, the bombs would often bury themselves deep into the ground, which meant that even aircraft or personnel close by were undamaged. The 132lb bombs with instant fuzes were often more effective since they could damage aircraft up to 50 yards away. Bettys sometimes carried 12 of these smaller bombs.

The Bettys flew in groups of nine aircraft (a *chutai*). Usually, raids consisted of two or three *chutais* with as many Zeros as were available to provide escort. The usual bombing altitude was 25,000 to 27,000 feet. The nine-plane *chutais* were arranged in a large V formation with one *chutai* in the middle and two on the flanks. Within each *chutai*, the formation was broken down into three smaller Vs, each with three aircraft. The escorting fighters were placed above, below, and on the flanks of the bomber formation to cover all avenues of approach by the Wildcats.

Bases

Almost all the 11th Air Fleet's aircraft were based at the airfields around Rabaul. Fighters and dive-bombers flew from Lakunai Field, Bettys from Vunakanau Field. Betty operations later moved to Kavieng because it was out of the range of Allied bombers. The fact that the

This photo shows a group of Bettys taken from the waist gun position of the viewing aircraft. The Betty was a formidable aircraft early in the war against minimal Allied opposition, but against the Americans on Guadalcanal the Betty proved incapable of performing effectively in a counter-air role. (UN/ Public domain)



Mitsubishi A6M2 'Zero' fighter



2,000-3,000ft



Mitsubishi G4M1 'Betty' bomber



25,000ft



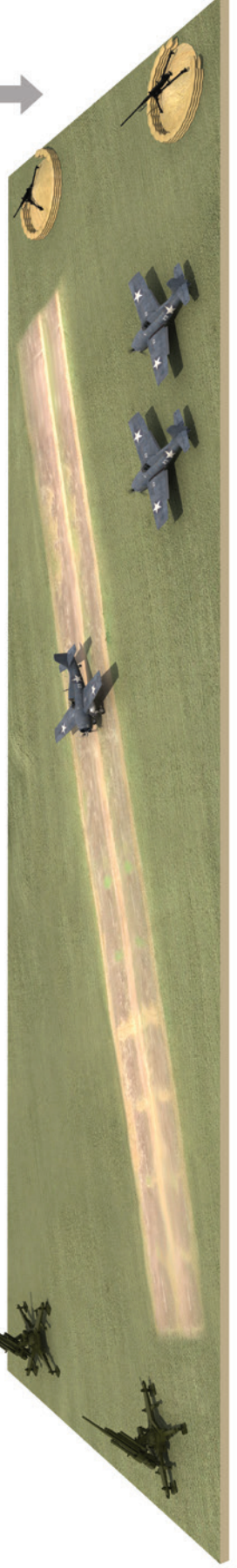
Mitsubishi A6M2 'Zero' fighter
strafing run



100-300ft



Henderson Field



major Japanese airbases were in Rabaul was a major factor since these were 565nm from Guadalcanal. The Japanese failed to address this problem during most of the campaign. Buka Airfield on northern Bougainville was used as a forward staging base on a limited basis but was never developed as a major base.

A critical weakness for the Japanese during the campaign was their inability to finish the airbase at Buin, located on southern Bougainville. Work was begun with the original goal of completion by August 31. The spot chosen was a bad one with soggy ground made worse by persistent rains. Completion was delayed until September 17 and then 26. The Japanese tried using metal mats and stones, but the airfield remained incomplete by the end of September. Not until about October 10 did operations begin from Buin Airfield. This base had the potential to bring Japanese air power to within about 365nm of Guadalcanal, which would have been a major force multiplier. It would have allowed the Japanese to employ the A6M3 Model 32 Zeros over Guadalcanal, which did not have the range to reach the island from Rabaul. The new base would have other benefits for the A6M2 Zeros like increasing their loiter time over Guadalcanal and decreasing pilot fatigue and mechanical problems caused by the long missions from Rabaul.

Work began on another airfield at Munda on New Georgia Island in the central Solomons on November 24. This was a mere 175 miles from Henderson Field. By December 5 the Americans discerned that the airfield was largely complete despite elaborate camouflage to hide the extent of progress. By December 14 the field was completed, and revetments finished for 30 Zeros. Final preparations were finished by December 19. Beginning on December 12, the airfield was bombed almost daily by American aircraft. On December 23 and 24, the Cactus Air Force destroyed or damaged the 24 Zeros which had arrived

The Zero was also the principal fighter of the IJN's land-based fighter groups, like these aircraft here photographed on Rabaul. Flying at great distances from Rabaul to Guadalcanal, the Zeros operated at a disadvantage. With the relatively few Zeros available early in the campaign, the Japanese were unable to clear the airspace over Guadalcanal of American fighters. (IJN/Public domain)





on the 23rd. By December 27, Kusaka saw Munda as more of a drain, and pulled the remaining aircraft back to Rabaul.

Tactics

Having to fly from Rabaul was a major factor shaping Japanese tactics. It forced the Japanese to adhere to a pattern of operations which the Americans quickly understood and exploited. Since few aircrew were experienced in night operations, the Japanese had to avoid taking off too early from Rabaul or returning too late to land in the dark. Since it was a four-hour flight from Rabaul to Guadalcanal, this meant that the Japanese arrived over Guadalcanal between 1130 and 1430hrs. It also meant that only one sortie per day was possible. The flight down was exhausting and left the escorting Zeros with a limited time to conduct air combat. When the airfield at Buin was finished late in the campaign, the Japanese developed new tactics built around a morning fighter sweep combined with the usual afternoon bombing attack in hope of catching the American fighters on the ground.

Another major factor in the outcome of the air campaign was the survival rate of Japanese pilots who were shot down. Betty aircrew did not even carry parachutes, so their survival was extremely unlikely. Few Zero pilots put their parachutes on since to use them could lead to potential capture, which was a fate worse than death. If Japanese aircrew did survive the destruction of their aircraft, few ever returned to duty.

Japanese aircrew

Aircrew training in the IJN was based on the Japanese intent to produce a small number of elite pilots who would sweep all before them. This succeeded in producing an extremely well-trained group of pilots, but this low-output, high-quality model could not be maintained in high-intensity combat. Nevertheless, the IJN Air Force still retained a large core of highly trained fighter and bomber pilots in mid-1942 who were sent to battle the Americans in the South Pacific.

Heavy losses during the campaign resulted in a significant drop in the average skill level of Japanese pilots. This was observed by the Americans and was so obvious to the Japanese that they took measures to address the problem. After the November battles, Admiral Kusaka sent half of his bomber force to Tinian for remedial training. A significant number of the newly arrived Zero pilots were sent to Kavieng for the same purpose. Most of these pilots had never flown a Zero before arriving at the front. The chief of staff of the 11th Air Fleet assessed that the proficiency level of the new fighter pilots was only a third of that of the men they replaced.

The Aichi D3A1 Navy Type 99 Carrier Bomber Model 11 (Val) was the IJN's standard early-war dive-bomber, equipping both land-based and carrier units. Despite its outdated appearance it was an accurate dive-bomber and sank more Allied ships than any other Japanese aircraft. It played a minor role in the Guadalcanal campaign since it lacked the range to fly from Rabaul to Guadalcanal and return. (IJN/Public domain)



DEFENDERS' CAPABILITIES

The Cactus Air Force

Major General Alexander Vandegrift was the outstanding commander of the Guadalcanal campaign. He easily defeated all three Japanese attempts to break through the Marine perimeter and seize the critical airfield. (Official Marine Corps photo courtesy of Marine Corps History Division)

Commanders

At the start of the campaign, Vice Admiral Robert L. Ghormley was Commander, South Pacific Area and in this capacity oversaw Operation *Watchtower*. Ghormley had no operational experience, was too cautious, and throughout his tenure he prioritized protecting the SLOCs running through his area over holding Guadalcanal. Ghormley was relieved by Vice Admiral William F. Halsey in October. Halsey was much more aggressive than Ghormley and was viewed as a fighter so had a much better relationship with the Marines on Guadalcanal. He promised and delivered a greater level of support for the Marines, which translated into more reinforcements for the Cactus Air Force.

The Marines on Guadalcanal were under the command of Major General Alexander A. Vandegrift. He proved masterful at understanding Japanese intentions and fought a brilliant campaign during which he protected Henderson Field from ground attack.

Rear Admiral John S. McCain was Commander, Air Forces, South Pacific (COMAIRSOPAC) at the start of the campaign. As such, he controlled all land-based aircraft in the South Pacific, including those of the USAAF. He fully supported Operation *Watchtower*, unlike Ghormley, but his performance was uneven early in the campaign. As COMAIRSOPAC, he was responsible for feeding reinforcements into Guadalcanal. McCain correctly foresaw early in the campaign that Guadalcanal would become a bottomless pit for Japanese air and naval forces. He also made sure the Cactus Air Force had strike aircraft, which was a key decision. Because of his errors early in the campaign, Nimitz had him relieved in September. Rear Admiral Aubrey Fitch took over as COMAIRSOPAC on September 21. He was a naval aviator like McCain. Fitch was unable to address the structural and communication problems of his command, but he effectively supported the Cactus Air Force during the October and November Japanese offensives.

The commander of Marine Air Wing One was Brigadier General Roy S. Geiger. He was easily the most important command figure in the early battles for control of the air space



over Guadalcanal. At the start of the campaign, he was 57 years old. After getting a law degree, he joined the Marine Corps and graduated flight school in 1917, becoming the 49th naval aviator. He was a very hands-on commander and had flown all aircraft in the Marine inventory. Geiger was a very demanding leader who drove his men hard, but he drove himself just as hard and set an example for his airmen to follow. He quickly grasped the situation on Guadalcanal and ruthlessly exploited the advantages he held. Geiger's headquarters was a short distance from the airfield and he shared all the hardships of the other Marines on the island. When morale sagged in September, he drove his men harder by ordering more offensive missions and issuing an admonishment to do all they could. On September 22, Geiger flew a Dauntless on a combat mission to set the example for the younger men. Much to his chagrin, Geiger was ordered to give up his command in early November because of extreme fatigue.

In the first week of November, Brigadier General Louis E. Woods took over from the exhausted Geiger. Woods had been an aviator since 1922 so was well acquainted with all aspects of Marine aviation. He brought fresh energy and a killer instinct to the decisive November air battles.

Aircraft units

The South Pacific air command was under-resourced and suffered from a lack of aircraft and facilities. On August 7, the command had 282 aircraft spread out to cover the SLOCs from the United States to Australia with relatively few aircraft earmarked directly for Operation *Watchtower*. Chronic shortages existed of replacement aircraft, aircrew, parts, engines, and mechanics.

In particular, the supply of fighters for Guadalcanal was very limited. The bulk of the air combat was handled by the F4F Wildcat but there was only a limited number of Wildcats in the entire Pacific theater. One potential source was the USN carrier squadrons, but since the protection of the carriers was Nimitz's highest priority, these were off limits for duty on Guadalcanal. Ghormley had three Marine Wildcat squadrons but these were retained on the various islands on SLOC protection duties.

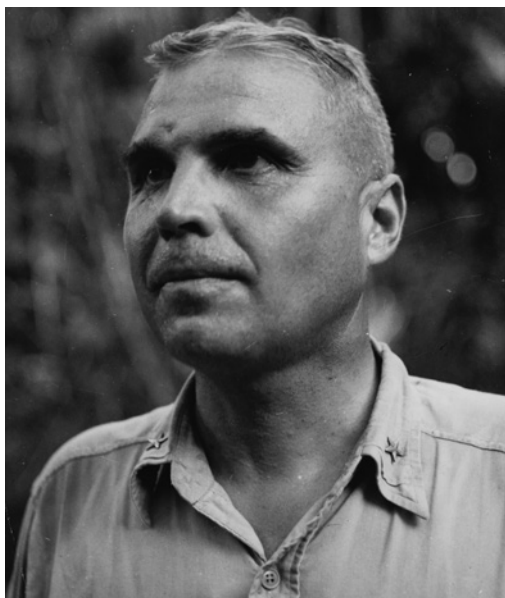
The source for the first aircraft based on Guadalcanal was Marine Air Group 23. This unit was formed on May 1 on Oahu. It consisted of two fighter squadrons and two dive-bomber squadrons. The fighter squadrons were VMF-223 and VMF-224. As late as July, they were equipped with the obsolete Brewster F2A-3 Buffalo. This was the aircraft which made up most of the defending Marine fighters at Midway in June. Of the 18 Buffalos committed against the attacking Zeros, only five survived. In July, the two squadrons were

ABOVE LEFT

Vice Admiral William Halsey, shown here on the left conferring with Major General Alexander Vandegrift, took over responsibility for directing the Guadalcanal campaign right before the Japanese October offensive. His arrival immediately energized the defenders and resulted in much more support for Vandegrift's Marines. (Naval History and Heritage Command)

ABOVE RIGHT

Rear Admirals McCain (left) and Fitch pictured on Guadalcanal. Fitch relieved McCain as COMAIRSOPAC on September 21. McCain's departure was mourned by the Marines on Guadalcanal, but Fitch was much more effective in rendering support to the Cactus Air Field. (Official Marine Corps photo courtesy of Marine Corps History Division)



Brigadier General Roy Geiger provided the grit behind the Marine air units based on Guadalcanal. His determination to take on the Japanese in the air above Henderson Field and the seas around Guadalcanal was evident throughout the dark days of September and early October when it seemed the Cactus Air Force had been forgotten. He went on to a very successful wartime career including being the only Marine aviator to hold command of a field army when he temporarily took command of the 10th Army on Okinawa in 1945. (Official Marine Corps photo courtesy of Marine Corps History Division)

re-equipped with the F4F-4 version of the Wildcat and their commanders were alerted for an impending "special mission." Though Ghormley wanted the Marine squadrons immediately, Nimitz refused to let them go until August 1 in order to allow them a period of intensive training. The two fighter squadrons were filled out with pilots just out of flight school and the survivors of VMF-221, which was so roughly handled at Midway. The commander of VMF-223 was Captain (later Major) John L. Smith. He was an outstanding combat leader who claimed a score of 19 Japanese aircraft, the second highest total for any pilot during the campaign. He put the squadron through a 3–4-week intensive program of training. On August 1, the squadron embarked aboard escort carrier *Long Island* for movement to the South Pacific.

VMF-223's state of training was of such concern that McCain directed Smith to exchange 12 of his least-trained pilots for 12 more-experienced pilots from VMF-212 based on the island of Efate. This required *Long Island* to make a detour for the exchange, which meant that the carrier would not be in position to launch aircraft to Guadalcanal until August 20.

The two dive-bomber squadrons, VMSB-231 and VMSB-232, were re-equipped with the SBD-3 model of the Dauntless dive-bomber which was the latest version and carried armor and self-sealing gas tanks. Joining VMF-223 aboard *Long Island* was VMSB-232 under Major Richard Mangrum. In July, this squadron was brought up to strength with ten new pilots just out of flight school, some of whom had never dropped a bomb.

It was apparent very early that the intense pace of combat and the high level of operational accidents would require a constant influx of replacement aircraft and new squadrons to keep the Cactus Air Force viable. On August 30, the first Marine air reinforcements arrived on Guadalcanal. This included 19 Wildcats of VMF-224 under Major Robert Galer and 12 Dauntless dive-bombers of VMSB-231 under Major Leo Smith. Galer was an outstanding pilot who became the fourth-highest ace during the campaign with 13 kills. Accompanying them was Col. William Wallace, commander of Marine Air Group 23. In late September, the next wave of reinforcements began to arrive. This consisted of VMSB-141, VMF-121, and VMF-212 of Marine Air Group 14. Among the pilots in VMF-121 was Captain Joe Foss who became the top scorer during the campaign with 26 claimed kills.

In early November, Marine Air Group 11 took over. VMSB-132 began operations on November 1, VMF-212 on November 2, and VMSB-142 and VMSB-131 on November 12. VMSB-131 was the first Marine torpedo bomber unit. In mid-November there were 1,748 aviation personnel on Guadalcanal of which 1,557 were Marines.

Complementing the Marine squadrons were USN aircraft. Though relatively small in numbers, Navy aircraft played a significant role. These carrier squadrons were better trained than MAG-23's squadrons and the Navy dive-bombers possessed greater skills in attacking maritime targets. The first to arrive on August 24 were from carrier *Enterprise*. This added eight Dauntless dive-bombers from VS-5 and another three from VB-6 to the Cactus Air Force's small strike contingent.

On August 31, carrier *Saratoga* was torpedoed by a Japanese submarine and forced out of the campaign for three months. This was followed by the sinking of carrier *Wasp* on September 15, again to a Japanese submarine. Though disastrous for the USN, these events proved a windfall for the Cactus Air Force. Despite reluctance by Ghormley to base them on Guadalcanal, aircraft squadrons from both ships were eventually made available for duty on Guadalcanal. From *Saratoga* came VF-5, VS-3, and VT-8, all experienced and well-trained



FAR LEFT

Major John Smith, commander of VMF-223, was the most important fighter commander in Cactus Air Force history. Not only was he a skilled fighter pilot with 19 kills, but he also trained and led VMF-223 into a crack squadron which claimed 83 kills during the campaign. Perhaps most importantly, he devised tactics that maximized the Wildcat's capabilities, decimated the IJN's vulnerable Betty bomber force, and preserved the Wildcat force from excessive attrition by engaging the Japanese Zeros. In February 1943, he was awarded the Medal of Honor for his exploits on Guadalcanal. (Naval History and Heritage Command)

LEFT

Major Richard C. Mangrum was to the Cactus Air Force's dive-bomber force what Smith was to the fighter force. He arrived on Guadalcanal on August 20 as commanding officer (CO) of VMSB-232. When he was evacuated from Guadalcanal on October 14, he was the only pilot in VMSB-232 not killed, wounded, or previously evacuated for sickness. During his tenure on the island, he flew 28 missions, including ten strikes, an indication of the grueling pace maintained by the original squadrons of the Cactus Air Force. (Official Marine Corps photo courtesy of Marine Corps History Division)

squadrons. The arrival of the 24 Wildcats from VF-5 on September 11 was a big morale boost. The dive-bombers of VS-3 were a welcome addition with their skills in over-water navigation and ship recognition. The Avengers of VT-8 gave the Cactus Air Force its first torpedo attack capability. From *Wasp* came VS-71. In November, most of Air Group 10 from *Enterprise* was temporarily based at Henderson Field, which allowed the carrier to be moved out of the range of aircraft from Rabaul.

The USAAF

General Henry Arnold, commander of the USAAF, placed the South Pacific into the greater context of the Army Air Forces' global requirements. To him, the South Pacific ranked as a low priority compared to the upcoming invasion of North Africa, the build-up in England for the strategic bombing of Germany and the invasion of Europe, and the defense of Australia and Hawaii. This meant few resources for the South Pacific. Despite pleas from Nimitz for long-range P-38 fighters, the first did not reach Guadalcanal until November 12. For the first half of the campaign, the sole USAAF unit on Guadalcanal was the 67th Fighter Squadron. This squadron had many experienced pilots but was saddled with inferior aircraft. These were the P-400 and P-39 single-seat fighters. On August 21, five P-400s reached the island. Nine more P-400s arrived on August 27. Later in the campaign, five other fighter squadrons reached the island, including the 339th Fighter Squadron with the long-range P-38 fighter. On November 14, the 70th Squadron arrived at Henderson Field with ten B-26 medium bombers. Three fighter squadrons (12th, 68th, and 70th) arrived in December and a second squadron of B-26s in the 69th Bombardment Squadron arrived before the end of the year.

The other principal USAAF unit involved in the campaign was the 11th Bombardment Group (Heavy). The group comprised four squadrons, each flying the four-engine B-17 heavy bomber. The group flew from Espiritu Santo, not Henderson Field, so was not part of the Cactus Air Force. The B-17s occasionally operated from Henderson Field but these operations were minimal because of the desire not to risk the aircraft at a forward base and because of the B-17's extensive logistical requirements. The B-17 had a formidable reputation for accurate bombing but proved almost totally ineffective during the campaign against maritime targets. The 11th Bomb Group was a stalwart during the campaign performing mainly in the reconnaissance role. It was under the command of Col. Laverne G. Saunders.



The P-40 was a second-line fighter deployed to Guadalcanal as the primary aircraft of the USAAF's 67th Fighter Squadron. Because it lacked the ability to operate above 14,000 feet, it was useless as an interceptor. However, it was very successful during the campaign as a ground attack aircraft. (Official Marine Corps photo courtesy of Marine Corps History Division)

The F4F-4 Wildcat was the mainstay American fighter during the Guadalcanal campaign. Though slower and less maneuverable than its Japanese counterpart, it possessed important advantages which could be maximized by the employment of smart tactics. During the campaign Wildcats shot down more Zeros than were lost to Zeros in air combat. (Official Marine Corps photo courtesy of Marine Corps History Division)

Aircraft

The mainstay American fighter during the campaign was the F4F Wildcat. The stubby square-winged aircraft was the standard fighter for the USN and the land-based squadrons of the United States Marine Corps. It was slower than the Zero with a top speed of 278 knots at 18,800 feet, but its greater weight meant it could out-dive the Zero. Because the aircraft was underpowered, its climb rate was slow taking 12.4 minutes to get to 20,000 feet. Its principal attributes were protection for the pilot and self-sealing fuel tanks. It was heavily armed with six .50-caliber machine guns, which could tear apart a Zero. There were two key pieces of equipment on the Wildcats that were necessary for a successful





interception and on Guadalcanal it was challenging to keep both operational. One was the supercharger for the engine and the second was the oxygen system for the pilot. If either failed, the aircraft could not reach high altitude and the wise pilot took his plane out of the fight.

The principal USAAF fighter for most of the campaign was the P-40. The P-40 was the export version of the P-39. This was a second-line fighter and exemplified the USAAF's prioritization for the South Pacific. Without an operational oxygen system (it had been built for export and thus was fitted with a British high-pressure oxygen system, and bottles for this were not available in the South Pacific), the P-40s could reach 14,000 feet but could not operate there on a sustained basis. Since they were not suitable for high-altitude operations the P-40 was unable to attack the high-flying Bettys and it made fighting the Zero almost suicidal. The P-40 made only a handful of air-to-air

The Cactus Air Force's principal striking weapon was the Douglas SBD-3 Dauntless. It served in both Marine and Navy dive-bomber squadrons and proved to be a rugged and potent aircraft. It was a stable dive-bombing platform which could carry 1,000 or 500lb bombs. (Official Marine Corps photo courtesy of Marine Corps History Division)



The Cactus Air Force's other strike aircraft was the TBF-1 Avenger, an example of which is shown here in 1945. The Avenger equipped one Marine squadron and two Navy squadrons on Guadalcanal. It gave the Cactus Air Force a torpedo attack capability and played a key role in sinking battleship *Hiei* in November. (Official Marine Corps photo courtesy of Marine Corps History Division)

OPPOSITE: AMERICAN DEFENSIVE SCHEME TO PROTECT HENDERSON FIELD**BELOW LEFT**

The so-called "Pagoda" was a structure built by the Japanese. It served as the headquarters of the 1st Marine Air Wing until it was damaged in October 1942 and was then demolished by orders from Geiger, who feared it was being used as an aiming point by the Japanese. (Official Marine Corps photo courtesy of Marine Corps History Division)

BELOW RIGHT

An air raid warning alarm on Henderson Field made from the former nose cone of a Japanese 14-inch shell. The Americans depended on early warning of Japanese raids from a system of coast watchers and radar, which could provide up to 1 hour 40 minutes' warning before the arrival of the Japanese bombers. This was enough to get all personnel into shelters and the Wildcats up to their interception altitude. (Official Marine Corps photo courtesy of Marine Corps History Division)

missions until heavy losses on August 30 relegated the fighter to ground support and reconnaissance missions. The P-400s possessed a heavy armament, which made them well suited for ground attack missions. The P-400s were augmented by the P-39K, which had a maximum altitude of 27,000 feet but this still made the aircraft unsuited for air combat with the Zero.

Just as important as the Wildcat to American fortunes on Guadalcanal was the Cactus Air Force's principal strike aircraft, the Douglas SBD-3 Dauntless dive-bomber. The Dauntless was a two-place single-engine aircraft noted for its ruggedness and its ability as an accurate bombing platform. The SBD-3 was the latest version with a dual machine gun for the rear gunner and improved armor and self-sealing fuel tanks. The Dauntless had a mediocre top speed but could carry a 1,000lb bomb out to some 225–250 miles or a 500lb bomb and conduct scouting missions out to about 325 miles.

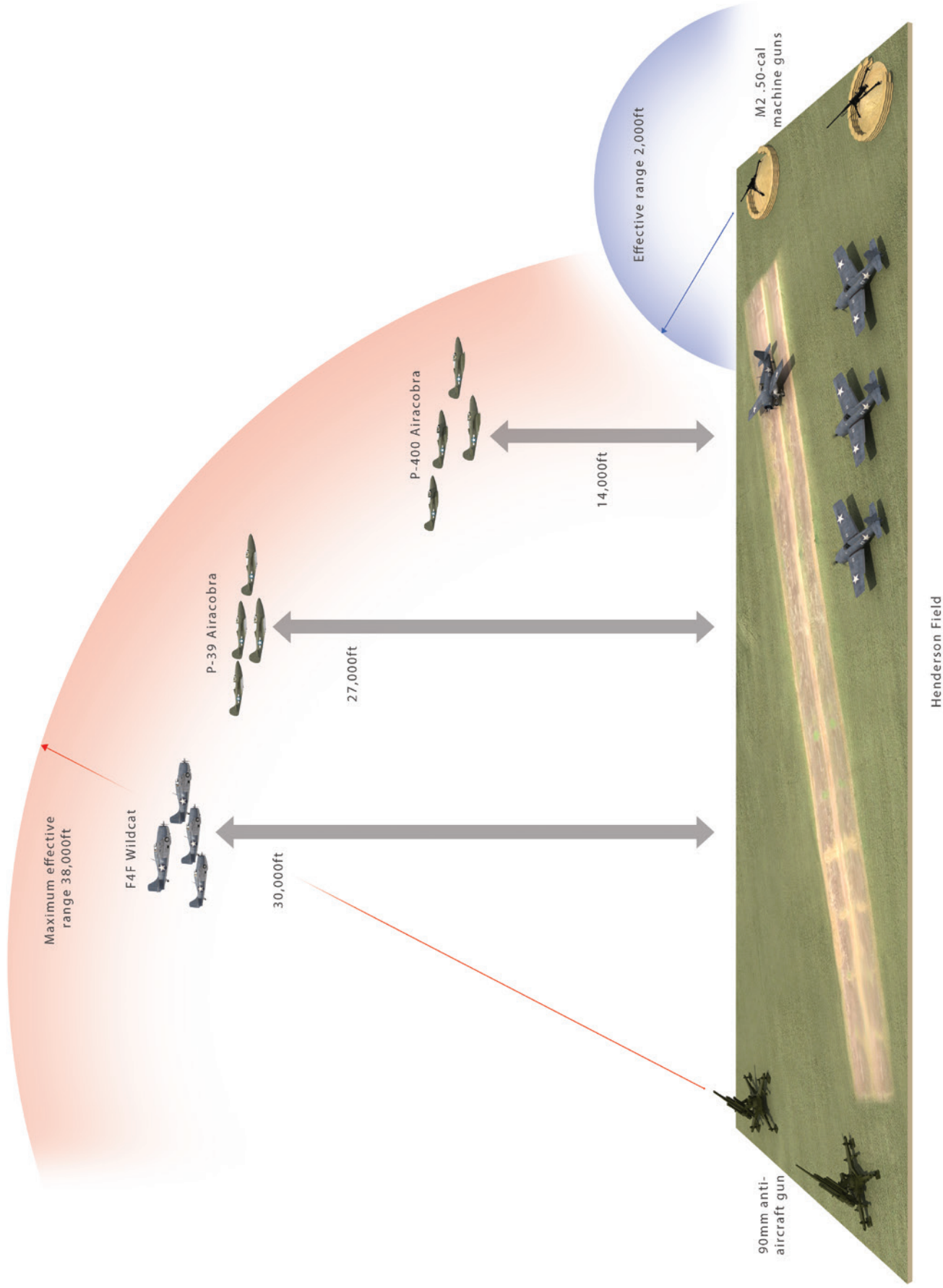
The Grumman TBF-1 Avenger was even more rugged than the Dauntless. It had just entered service as the USN's (and later the Marine Corps') standard torpedo bomber. Unfortunately, the Mark XIII torpedo was unreliable, but the aircraft could also carry two 1,000lb bombs or four 500lb bombs. The Avenger carried three machine guns.

The Cactus Air Force air defense system

The Japanese faced a four-hour flight from Rabaul before they arrived over Guadalcanal. During this flight they overflew several other Solomon Islands where Australian coast watchers were located. In March 1942, these coast watchers were activated as part of the Allied Intelligence Bureau. These included Jack Read on the northern tip of Bougainville Island overlooking Buka, Paul Mason on the southern part of Bougainville overlooking Buin and the Shortlands, and D. G. Kennedy at Segi Point on New Georgia Island in the central Solomons.

Once they spotted Japanese air activity, the coast watchers radioed an alert to Guadalcanal. If the central Solomons coast watchers spotted the Japanese headed southbound, this provided a 45-minute alert. This was enough time for the Wildcats to take off and reach their interception altitudes and for the other operational aircraft to get off the ground to avoid Japanese bombs. Eventually, the Japanese figured out the locations of the coast watchers and took evasive courses to fly around them.





**ABOVE LEFT**

The primary air defense weapon at Henderson Field for use against high-altitude bombers was the M1 90mm anti-aircraft gun. The 3rd Defense Battalion had 12 of these guns, and the first battery to arrive was set up at the midpoint of the runway as seen in this photo. The guns were dug in, making them invulnerable to anything but a direct hit. The other two batteries did not arrive until September 19. (Official Marine Corps photo courtesy of Marine Corps History Division)



The first American radar on Guadalcanal was not operational until the last day of August. This was an SCR-270-B, which could detect a high-flying large formation like those used by the Japanese at ranges up to 130 miles. This was crucial since at this range the Wildcats had barely enough time to get to their desired interception altitudes. A second radar was operational by about September 15. Both were unreliable and crude instruments which could provide speed and bearing of a Japanese aircraft formation but not altitude.

Defending the airfield was the job of the 3rd Defense Battalion under Col. Robert H. Pepper. The defense battalions were a Marine Corps innovation equipped with a variety of heavy weapons to defend advanced bases. The 3rd Defense Battalion possessed 12 90mm anti-aircraft guns and a large number of smaller weapons. Only one battery of four 90mm guns was landed initially and it was first in action on August 11. This battery was placed near the midpoint of the runway so it could concentrate its firepower over the airfield. The other two batteries arrived on September 19. The 90mm guns were provided with two SCR-268 gun control radars but these lacked the capability to provide precise directions

ABOVE RIGHT

The M1 90mm anti-aircraft gun was an excellent weapon, which could fire a 23lb shell up to 33,800 feet. The rate of fire was 22 rounds per minute. This forced the Bettys to drop their bombs from 25,000 feet to stay above the effective range of these guns, which drastically reduced accuracy. (Official Marine Corps photo courtesy of Marine Corps History Division)





This is Captain Joe Foss and several other pilots of VMF-121 sitting on an F4F-4 Wildcat. Foss was credited with 26 victories, making him the highest-scoring American ace of the campaign. On November 7, Foss's Wildcat was damaged by the rear gunner of an F1M2 Pete and he was forced to conduct a perilous water landing during which he almost drowned. Foss was one of four Cactus Air Force aviators to be awarded the Medal of Honor for his service during the campaign. (Naval History and Heritage Command)

to the gun batteries. To provide defense against strafing attacks, the Marines positioned eight 40mm single Bofors guns and an unknown number of twin 20mm and .50-caliber machine guns around the airfield.

Tactics

The key to defending Henderson Field was conducting effective interception of Japanese raids. As already discussed, the Marines had two primary sources of warning of incoming Japanese raids – coast watchers and radar. Every minute of early warning was crucial since enough time had to be gained to give the slow-climbing Wildcats time to assume their preferred interception altitude of 30,000 feet or more. Above 20,000 feet, the aircraft climbed only 500 feet per minute. If inadequate early warning was available, the result was usually a failed interception.

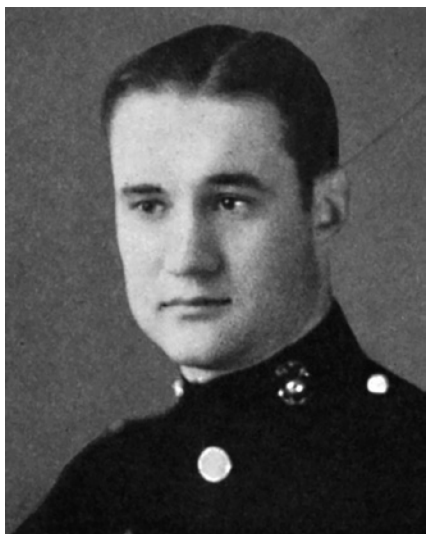
The system used to control the fighters was crude. Initially, it was a one-man show with the Marine air operations officer launching fighters when he received a radar contact. Once airborne, the Wildcats were not sent far from the airfield to conduct a radar-directed interception since the effective range of the radios on the Wildcats was only 10–15 miles. The air operations officer kept in touch with the airborne fighters through a salvaged aircraft radio mounted on his truck. The same officer also acted as an observer to identify enemy aircraft and sound the air raid alarm. In October, two naval officers who had graduated from the Navy's fighter direction school arrived on Guadalcanal. They had to contend with the same unreliable radars and the lack of coordination between the 90mm gun batteries and the airborne fighters. The radar problem was largely solved by the ministrations of a single master technical sergeant who possessed the uncanny ability to tell how many and what types of Japanese aircraft were in a formation and their approximate altitude well before they arrived near Henderson Field. By November, all the radars on the island were linked together and the coordination between fighters and antiaircraft guns was much improved. The system proved resilient enough to survive the 82 air raids recorded by the 3rd Defense Battalion between the start of the campaign and November 15.

OPPOSITE

The primary weapon against low-altitude attacks was the M2 water-cooled .50-caliber machine gun. The weapon had an effective range of up to 2,000 feet and had a rate of fire of 450–600 rounds per minute. At the start of the campaign, there was a shortage of these weapons to protect the airfield and the 90mm guns. The M2 machine guns were supplemented by a small number of twin 20mm guns and eight 40mm Bofors guns. Japanese aircraft strafed the airfield on only a few occasions and suffered heavily when they did. (Official Marine Corps photo courtesy of Marine Corps History Division)

OPPOSITE: CACTUS AIR FORCE ATTACK PROFILES AGAINST JAPANESE SHIPPING

Lt. Col. Harold Bauer, CO of VMF-212, scored the first of his ten kills on September 28. Bauer made a dramatic return on October 16 when he led a reinforcement flight from Espiritu Santo to Henderson Field. Upon arriving he sighted eight Japanese Val dive-bombers attacking the destroyer-seaplane tender *McFarland* and went to her assistance, even though he was low on fuel. He splashed three of the Vals before finally landing where he gave a morale-lifting speech to the aviators on Henderson Field. His fighting career ended on November 14 when he was escorting a strike force to attack the large Japanese convoy headed for the island. Bauer shot down one Japanese aircraft but was forced to make a water landing. He was observed in his raft but disappeared despite an intense search. For his Guadalcanal service, Bauer was posthumously awarded the Medal of Honor. (Official Marine Corps photo courtesy of Marine Corps History Division)



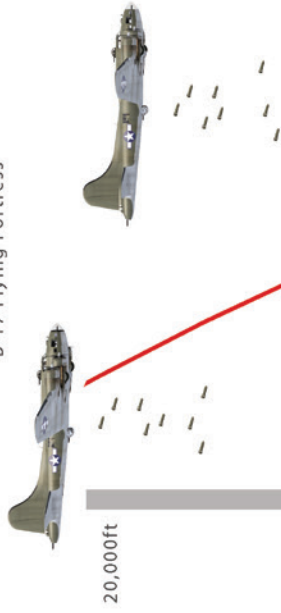
Air tactics were critical since the Wildcat was inferior in many regards to the Zero and the experience level of the Marine fighter pilots was low in many cases. Major Smith, commander of VMF-223, devised tactics that he taught to his pilots and that exploited the strengths of the Wildcat. Smith's preferred method of attack was to get to a point ahead of the bombers with a 5,000-foot height advantage. Once this position had been gained, which was not easy given the Wildcat's slight speed advantage over the Betty, Smith preached a diving attack concentrating on the trail aircraft in the formation. The desired firing range was 1,000 feet in a right-to-left diving attack across the bomber formation. This tactic had many key advantages. It used the Wildcat's superior diving speed to get past any escorting Zeros, it evaded most of the Betty's defensive armament, the Japanese formation could not evade it, and it presented a good shot on the Betty's vulnerable wing fuel tanks. After the initial attack, the Wildcats were told to pull out of the dive into a climbing left turn and then reassess. If the Zero escort had not intervened, Smith taught that the Wildcats should make another pass at the bombers. The primary mission of the interception was to break up the bomber formation. Obviously, the Zeros were not going to let the Wildcats attack the bombers without intervening, so when they did make an appearance Smith told his pilots not to get into a dogfight with the extremely maneuverable Zeros. The smart play was to use the Wildcat's superior diving speed to clear the area or seek safety in a cloud.

On October 23, the commander of Cactus Air Force's fighters, Lt. Col. Harold Bauer, ordered a change in tactics. He discerned that the quality of Zero pilots had declined, and he was sure that the Wildcat pilots were now better. Accordingly, he ordered his pilots on the October 23 interception to dogfight with the Zeros whenever the opportunity arose. The results on that day seemed to justify his assessment.

If the Marine pilots were shot down, even over Japanese lines, there was a good chance they would reach the Marine perimeter and return to duty. This was due to the brave efforts of the coast watchers and loyal local people on the island. More than half of the pilots shot down over or near Guadalcanal returned to fight again.

The Dauntless crews were just as important for the successful outcome of the campaign as were the Wildcat pilots. Each Dauntless carried two crewmen, the pilot, and the rear gunner. In addition to the Marine dive-bomber squadrons on the island, there was a constant rotation of Navy dive-bombers operating from Henderson Field. The Dauntless had a short combat radius when loaded with 1,000lb bombs. In the morning and afternoon, Dauntlesses were sent into the area known as the "Slot" (the passage between the central Solomon Islands leading to Guadalcanal) to scout for Japanese ships. The most common Japanese ships encountered were destroyers conducting transport missions down the Slot. If these ventured too close to Guadalcanal in the afternoon or were late leaving the waters off the island at night and had not steamed out of range by morning, they were liable to be attacked. Dive-bombing was an accurate method of attack when conducted by a trained crew but hitting a ship as fast and maneuverable as a destroyer was difficult for any dive-bomber pilot. If possible, the pilot would line up his attack along the ship's length to provide a larger target, but hits were rare on destroyers. At night, the Tokyo Express unloaded its cargo of troops and supplies only miles from Henderson Field. The

B-17 Flying Fortress



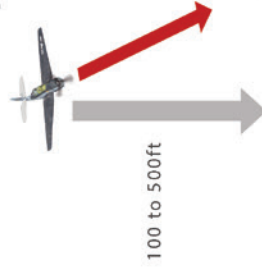
20,000ft



SBD Dauntless
12,000 to 15,000ft

Dive angle
65 to 70 degrees

TBF Avenger



100 to 500ft

F4F Wildcat



100 to 300ft





This is another view of Henderson Field before its capture by the Marines. The Pagoda-style building in the left center of the photograph was used by Geiger as his headquarters. The taxiway in the lower right of the photograph leads to an uncompleted dispersal area with revetments. The runway is just out of view to the bottom. (Naval History and Heritage Command)

Dauntless pilots were tempted to try night attacks. These were dangerous since they were operating from an unlit airfield. They were also ineffective since the Japanese destroyer captains learned to stay concealed in the darkness by not firing on the dive-bombers and keeping their speed down to reduce their wake.

Maintenance on all aircraft at Henderson Field was performed in the open, like those Wildcats shown here. Maintenance personnel lived in the tents beyond. Maintenance and ground support personnel were the Cactus Air Force's unsung heroes. (Official Marine Corps photo courtesy of Marine Corps History Division)



Henderson Field

After its capture, the Marines named the uncompleted Japanese airfield Henderson Field after a Marine aviator killed at the battle of Midway. Working furiously, the Marines completed the airfield by August 12. That day, a PBY Catalina made a test landing to confirm its condition to receive aircraft.

Though ready to receive aircraft, Henderson Field was an austere place to operate aircraft from. Most maintenance work was done in the open since there were few hangars and only a few primitive revetments. Bomb loading was done by hand. Refueling aircraft was an arduous process since it was also done by hand using pumps from 55-gallon drums. When fuel trucks arrived, they still had to be filled by hand from the drums.

The daily rain transformed the airfield into a muddy morass since most of the airfield was made of dirt. If the mud did not dry in time, the Wildcats were sometimes stuck in their dispersal areas or the airstrip itself was in no condition for takeoffs. Other hazards included the ruts made by the solid tail wheels of the Dauntless, and bomb and later shell craters. Even when these were filled, they settled and created giant potholes.

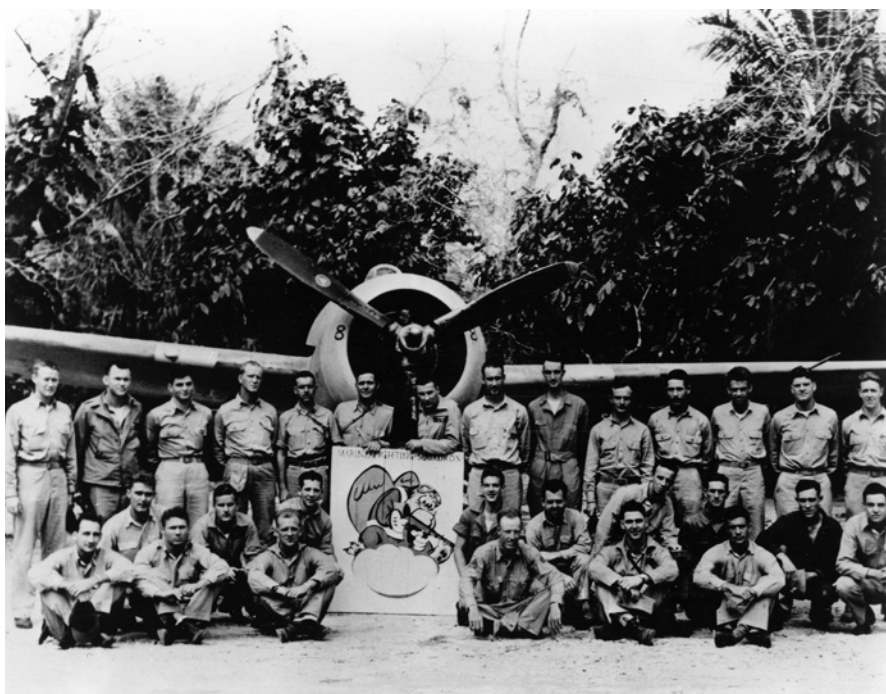
To provide better dispersal of aircraft, Fighter One was finished on September 9. It was nothing more than a grass strip located one mile east of Henderson Field. It was very difficult to keep drained since there was no metal matting.

By November, Henderson Field was expanded to 5,400 feet with 3,500 feet covered by metal matting. Fighter One remained a grass strip which was prone to flooding but was expanded to 4,600 feet. The flooding problems eventually forced its abandonment in December. Another facility to the northwest of Henderson Field was opened and named Fighter Two. It was a graded earth strip extending to 3,200 feet. It was used from the middle of December until March 1943.

This photograph shows Fighter One in the foreground with Henderson Field in the background. Because Fighter One was nothing more than a mowed strip of grassland, it was even more austere than Henderson Field and was very susceptible to flooding as a result of the daily rains. Nevertheless, it served as a vital dispersal area for the fighters and was useful as an alternative airfield when Henderson Field was temporarily knocked out after the bombardment on the night of October 13–14. (Official Marine Corps photo courtesy of Marine Corps History Division)



This is a photograph of the pilots of VMF-212, which arrived on Guadalcanal on October 16 and served for the remainder of the campaign. The squadron's commanding officer, Lt. Col. Bauer is standing eighth from the left. Though Marine Corps fighter squadrons were less experienced than their Japanese counterparts, Marine pilots proved that they were quick learners and were able to employ proper tactics which stressed teamwork and deflection shooting. (Official Marine Corps photo courtesy of Marine Corps History Division)



Aviation personnel lived in tents in the coconut groves between the airfield and the coast. This photograph shows one of those tents after the daily rains. The atrocious living conditions contributed to the short tours of duty for aviators on the island. (Official Marine Corps photo courtesy of Marine Corps History Division)



Most flight operations in support of the Cactus Air Force were conducted from Espiritu Santo which was 590 miles from Guadalcanal. The facility was completed on July 28 and was about as primitive as those on Guadalcanal.

American aircrew

The conditions the pilots had to contend with on Guadalcanal were brutal by any measure. Added to the usual stress of flying combat missions, the living conditions were extremely primitive. The pilots slept in tents in the coconut grove between the airfield and the coast. These tents were not elevated off the ground, and when it rained the floor turned to mud. They had no change of clothes and opportunities for personal hygiene were limited. The food was also bad. Since August 12, the garrison had been reduced to two meals a day. The food that was available was limited and often not nourishing. The food produced gas during digestion and when the pilots went to high altitudes the result was intense abdominal pain. Lack of adequate rest was also a problem since missions were flown daily and at night the pilots were kept awake by naval or artillery bombardments or Japanese floatplanes conducting harassment attacks. Disease was a major problem with malaria being prevalent. The net effect was to reduce the combat effectiveness of both fighter and dive-bomber pilots. The combined effect of mental exhaustion, poor diet, and the emotional stress of combat meant that the maximum combat tour was 4–6 weeks long. The commander of VF-5 stated that a man's guts were directly related to how rested he was. He thought that a week on Guadalcanal was worse than two months on a carrier.

By September, fatigue had taken its toll. Combat effectiveness was down, as shown by the inability of the Dauntless pilots to hit a target during the entire month, the accident rate was up, and there were even some incidents of pilots avoiding combat.

Logistics

The absence of developed harbors or other transportation facilities in the South Pacific made logistics difficult. The nearest developed deep-water port to Guadalcanal was Auckland. Auckland was 1,825 miles from Guadalcanal. Noumea on New Caledonia had a deep-water port which was estimated to be able to handle 24 ships per month. But there were no proper facilities or sufficient labor to unload ships when they arrived and no warehouses to store items once unloaded. The result was 86 ships backed up in the harbor by September 23. Noumea was still 1,100 miles from Guadalcanal. Once ships got to Guadalcanal, there were no cargo-handling facilities present. Ships had to be unloaded with cranes and smaller craft. Because the Marines on the island had very limited ability to unload ships, this meant that supply convoys were very small – two or three ships at a time. To handle critical items like fuel, Marine squadron VMJ-253 began regular runs on September 5. It was equipped with R4Ds (the Navy's designation for the DC-3). The second squadron of R4Ds, VMJ-152, arrived in October. The USAAF later contributed the 13th Troop Carrier Squadron to this mission. Each transport aircraft could carry 12 fuel drums with each drum able to put an aircraft in the air for one hour.

The two squadrons of Marine cargo aircraft, which flew RF4D (DC-3) aircraft, played a crucial but overlooked role during the campaign. Here a Marine RF4D takes off from the airfield on Espiritu Santo. These aircraft were essential for moving fuel and critical cargo to Guadalcanal and for evacuating wounded and sick personnel. (Official Marine Corps photo courtesy of Marine Corps History Division)





CAMPAIGN OBJECTIVES

The decisive island

This is a view of Henderson Field in August after the arrival of Marine aircraft. Most of the Marine aircraft can be seen around the left end of the runway. Several bomb craters are visible around the runway. Marine and Navy engineers soon devised a method to quickly repair bomb and shell damage to the runway. Sand and gravel was piled near the runway and then used to fill and tamp any damage. (Naval History and Heritage Command)

Japanese plans and objectives

The ultimate Japanese objective during the campaign was to expel the Americans from Guadalcanal and defeat the USN in the process. This was complicated by several factors, foremost of which was a continual underestimation of the size of the American force on Guadalcanal. This led to a gradual Japanese escalation of forces committed to the battle. Another complicating factor was the fact that the Imperial Army and Navy were fighting different battles. The Japanese produced an initial intelligence assessment that the American invasion force was only 2,000 men – more of a raid than a real invasion. This allowed the Imperial Army to believe that a single veteran battalion was enough to mop up the Americans. The Imperial Navy focused on destroying USN forces supporting the invasion, not on retaking the island, which it viewed as the problem of the Imperial Army.

Since they had drastically underestimated the size of the defending force, the initial Japanese attack on the night of August 20–21 met with disaster. This was followed by another defeat at the battle of the Eastern Solomons on August 24 during which the IJN failed to crush the US Navy and failed to get a small reinforcement convoy to the island. The problem of how to defeat the small American garrison on Guadalcanal became much harder when the Americans began operating aircraft from the island. This small air force played a lead role in turning back the Japanese reinforcement convoy on August 25. The Cactus Air Force became the principal complicating factor in any Japanese plan to recapture the island.

The lesson for the Japanese after their August defeat was clear – the American airfield on Guadalcanal had to be neutralized. As long as the airfield was operational, it was impossible to operate naval units safely within range of the airfield during the day. This meant troops and supplies could not be moved to the island by transport ships, which was both the most efficient method and the only way to move heavy equipment like artillery and tanks to

Guadalcanal. The only method left to move forces to the island in the face of American air power based on the island was by nightly destroyer runs, the so-called “Tokyo Express” (or called “Rat Transportation” by the Japanese). These runs began at Shortland Island on the southern tip of Bougainville and headed through the “Slot” for Guadalcanal. If timed correctly, the destroyers approached Guadalcanal at dusk just out of the range of aircraft from Guadalcanal and then made the final high-speed run to the island at night. Upon arrival the destroyers quickly unloaded troops into waiting barges, and then made a high-speed dash back up the Slot to get out of range of Henderson Field before dawn. This tactic offered a large degree of immunity from attack by aircraft based at Henderson Field since American aircraft typically did not fly at night and when they did their effectiveness was severely limited.

The problem with relying on destroyer runs was that they were extremely inefficient. Destroyers were designed for combat and had little room for carrying men or supplies. A typical load for a destroyer was limited to 40–50 tons of material on deck and some 150 troops. There was not enough space on deck to carry vehicles, tanks, or heavy artillery.

Using almost nightly destroyer runs, the Japanese moved the equivalent of a reinforced brigade to Guadalcanal by mid-September. This painfully built-up force conducted its attack against the Marine perimeter for two consecutive nights between September 12 and 14. The Japanese successfully moved a force of three battalions to within a mile of the airfield and fully expected to capture the airfield. However, the Japanese misjudged the effect of heavy terrain, which resulted in an uncoordinated attack. The attack was defeated by the brilliant defensive stand of two under-strength Marine battalions.

The September defeat caused the Imperial Army to recognize that a larger force was necessary for the next attack. To meet this new requirement and to get the force on Guadalcanal in time to conduct the attack originally planned for October 20, destroyer runs were no longer sufficient. Now the requirement to suppress the Cactus Air Force was paramount. Land-based air forces based at Rabaul had been charged with this responsibility since the Americans began operations from Henderson Field, but had consistently failed to suppress the airfield. This failure was due to several reasons, including the distance from Rabaul to Guadalcanal, which decreased the frequency and effectiveness of raids, the lack of sufficient numbers of aircraft, and the ineffectiveness of Japanese bombers and their escorts in a counter-air role. For the first time, the IJN put recapturing the island above its desire to defeat American naval forces. This was manifested by a new idea to suppress the Cactus Air Force – using battleships to bombard the airfield at night. When this was done on the night of October 13–14, the effects were devastating and resulted in the only serious suppression of Henderson Field during the campaign. This allowed the Japanese to move a transport convoy to the island. Combined with intensified Tokyo Express runs, the Imperial Army now had a reinforced division on the island.

For their October attack, the Japanese chose the same attack axis as the September attack. Again, they underestimated the impact of mounting a large-scale attack across heavy jungle and their attack was again uncoordinated. The Marines defeated the Japanese attack easily over the span of two nights between October 24 and 26. In contrast, the IJN defeated the USN in the carrier battle of Santa Cruz on October 26. The Imperial Navy was unable to exploit this victory immediately because of heavy losses to its carrier air groups, but the American carrier force, the principal supporting force to the Cactus Air Force, seemed to be eliminated.

The shock of another defeat on Guadalcanal drove Imperial Headquarters to a strategic consensus for the first time. Until now, the Imperial Army had its focus on the battle for New Guinea. Now it agreed with the Imperial Navy that the struggle for Guadalcanal was the decisive battle with the United States that both services had been seeking. The

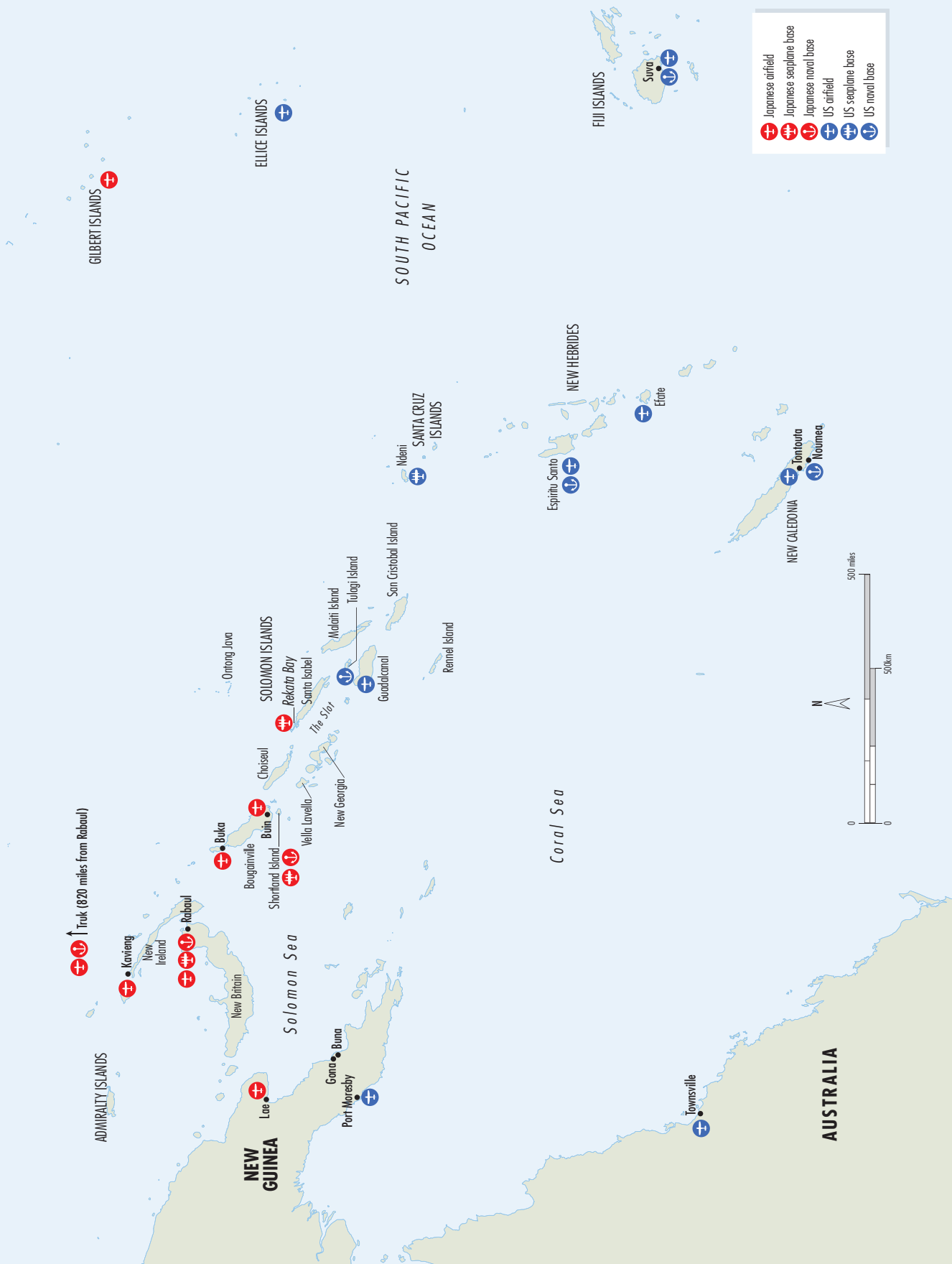
OPPOSITE: AMERICAN AND JAPANESE BASES IN THE SOUTH PACIFIC, AUGUST–DECEMBER 1942

The Guadalcanal campaign came to its decisive point in mid-November when the Japanese tried to run a large transport convoy to the island. The attempt was unsuccessful after the Japanese failed to suppress Henderson Field, which led to American airpower smashing the convoy. Here a Dauntless dive-bomber flies over the burning hulks of the four transports to reach the island on November 15. (Official Marine Corps photo courtesy of Marine Corps History Division)

IJA believed that it had come very close to victory in the October offensive and the IJN believed it had sunk as many as four American carriers at the battle of Santa Cruz. Therefore, conditions seemed ripe for yet another major effort to expel the stubborn Americans from Guadalcanal. To execute the next attack, the Imperial Army planned to move another two divisions to the island with the attack date originally set for late December. To move a force this size required transport convoys, which placed the Cactus Air Force back in a central role in the upcoming battle. Because their land-based air forces had proven so ineffective in suppressing Henderson Field, the Imperial Navy planned another battleship bombardment to obliterate Henderson Field. This brought the Guadalcanal campaign to its decisive moment. Over two nights between November 13 and 15, American naval forces defeated two Japanese attempts to hit the airfield with battleships. With Henderson Field still operational, the Cactus Air Force, assisted by the only remaining American carrier, crushed the large transport convoy headed for the island sinking ten of 11 transports.

The scale of this defeat, an entire convoy and two battleships sunk, forced the Japanese to reevaluate their strategic objectives in the South Pacific. The Imperial Army and Navy agreed that they were unable to sustain the struggle for Guadalcanal, and a withdrawal





OPPOSITE: HENDERSON FIELD AND THE MARINE PERIMETER ON GUADALCANAL

from the island was planned. The principal reason for this dilemma was the inability of the Imperial Navy to suppress the Cactus Air Force for any prolonged period, which prevented the Imperial Army from moving a force capable of defeating the Marines to the island. The presence of American air power also meant that the Japanese were not even able to move sufficient supplies to the island to feed their troops. The final phase of the campaign was the Japanese operation to remove their starving troops from the island. This was accomplished successfully in early February 1943.

United States' plans and objectives

The entire reason for invading Guadalcanal was the almost-completed airfield located there. Within two weeks of landing, the Americans completed the airfield and moved in two squadrons of Marine aircraft. This was a significant development since it gave Vandegrift an ability to attack Japanese naval forces within range and it released the USN's carriers from providing direct support to the Marine garrison. The importance of the small number of aircraft based on the island was quickly demonstrated when they forced back the small Japanese reinforcement convoy headed to the island on August 25, 1942.

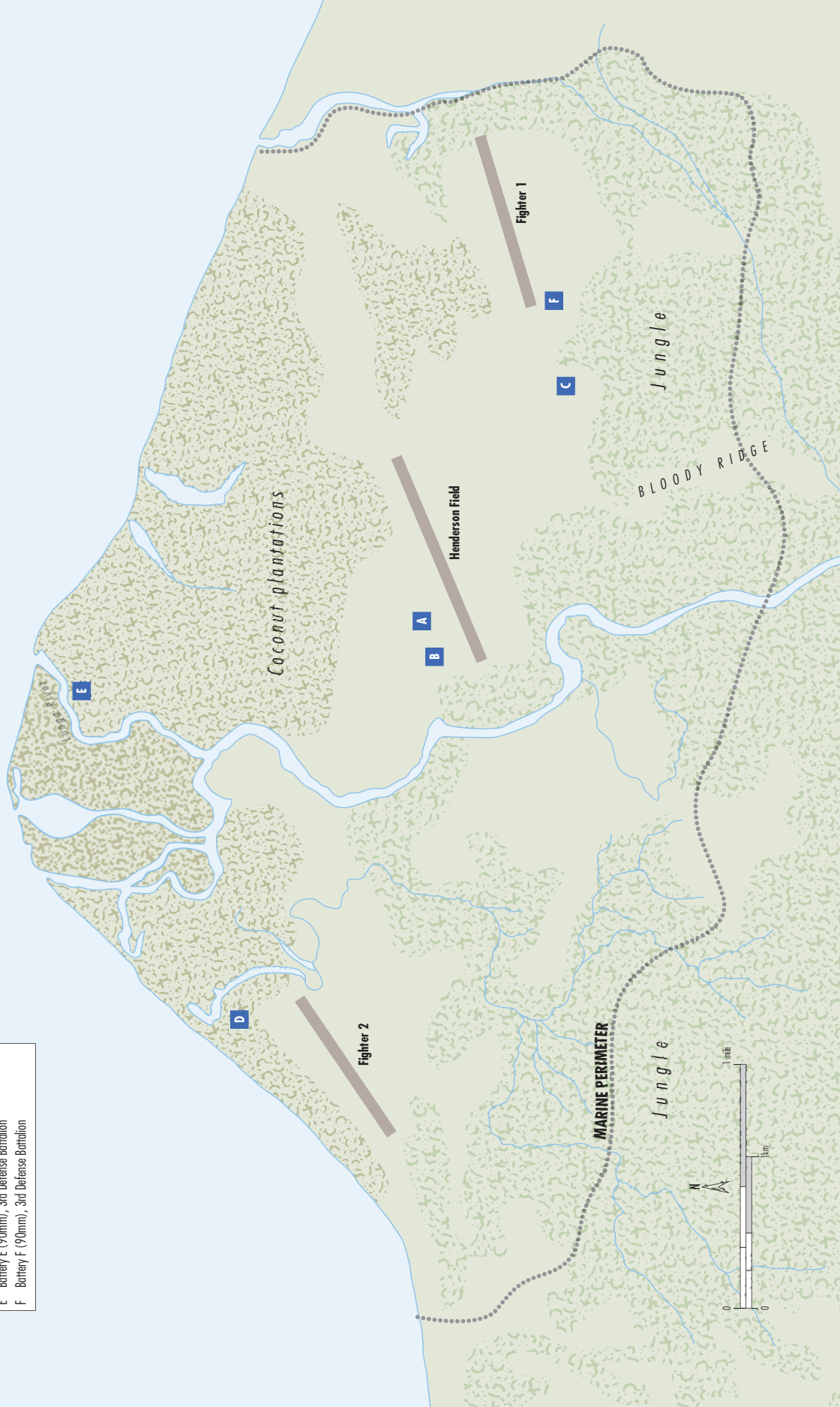
The lesson for the Americans from defeating this first Japanese attack was simple. Henderson Field had to be kept open and the number of aircraft on the island maintained to provide adequate air defense against Japanese air raids and to form a strike force against Japanese attempts to reinforce the island. Since the airfield was under constant attack from land-based aircraft from Rabaul, this meant a constant stream of reinforcements to the island was necessary. As long as a viable strike force remained on Henderson Field, the Japanese stood little chance of getting a large convoy to the island intact.

The imperative of maintaining a viable air strike force on the island was shown in the reinforcement battles of September and October. During the first two weeks of September, the Japanese were successful in moving a brigade to the island, but this force lacked the combat power to penetrate the Marine perimeter and capture the airfield. The Japanese took this lesson to heart and intensified efforts to suppress the Cactus Air Force in order to move a larger force to the island. This included the use of battleships to bombard the airfield, which led to the mostly successful operation to get a six-transport convoy to the island. Even so, the attack by a reinforced division with limited artillery and armored support proved unable to crush the Marines. The next Japanese attempt to move an even larger force to Guadalcanal was poorly synchronized and was defeated by the combined efforts of the USN and the Cactus Air Force. The failure of the Japanese November reinforcement effort brought the campaign effectively to an end.

The decisive factor in the campaign was whether the Americans maintained effective use of Henderson Field. American commanders achieved this by ruthlessly committing virtually every available Marine and Navy squadron in the South Pacific. Eventually, 11 Marine squadrons saw service on the island along with five Navy squadrons moved in from sunk or damaged carriers. In the last phase of the battle, the strike aircraft from *Enterprise* operated from Henderson Field for a few days. Throughout the battle, the USAAF provided lukewarm support, forcing the Marines and Navy to carry the fight alone. The commitment of the USN surface forces cannot be overlooked. When Halsey took over in October just before the Japanese offensive, he promised Vandegrift that he would support the Marines with everything at his disposal. This was a great contrast to

Marine facilities on Guadalcanal, late September

- A Pagoda Hill (Gaiger's HQ)
- B Radar One
- C Radar Two
- D Battery D (90mm), 3rd Defense Battalion
- E Battery E (90mm), 3rd Defense Battalion
- F Battery F (90mm), 3rd Defense Battalion



This is a view of Henderson Field on August 22, two days after Marine aircraft began operations from the airfield. It is nothing more than a single runway with no taxiways or completed dispersal areas. Note the hangars and Marine aircraft to the right of the runway. To the left are several bomb craters and the "Pagoda" command center on top of a small rise. (Naval History and Heritage Command)

the indecisive Ghormley. Halsey's ruthless determination to throw everything he had into the balance was also in marked contrast to Yamamoto who never succeeded in bringing his superior forces to bear.

On the tactical level, the leadership of the Cactus Air Force was inspired. The Americans faced a larger Japanese air force based at Rabaul with fighter aircraft of superior performance. The American fighter commanders on Guadalcanal negated this advantage by developing tactics to avoid the Japanese fighter escorts and concentrate on the bombers. Over time, this inflicted severe attrition on the Japanese bomber force and made it incapable of knocking Henderson Field out of action. The mission of the Wildcats based on Henderson Field was to break up the bomber formation and live to do it the next day, and the next. By refusing to dogfight the superior Japanese Zero, the Marine air commanders were also practicing force preservation.



Order of Battle

Imperial Japanese Navy

August 7, 1942

11th Air Fleet (Rear Admiral Tsukahara Nishizo)
25th Flotilla (Rear Admiral Yamada Sadayoshi)
4th Air Group (Rabaul)
 32 Mitsubishi G4M1 Navy Type 1 Attack Bomber Model 11 (Betty)
Tinian Air Group (Rabaul)
 24 Mitsubishi A6M2 Navy Type 0 Carrier Fighter Model 21 (Zero)
 2 Nakajima J1N1-C Gekko Model 11 (Irving)
2nd Air Group (Rabaul)
 15 Mitsubishi A6M3 Navy Type 0 Carrier Fighter Model 32 (Zero)
 16 Aichi D3A1 Navy Type 99 Carrier Bomber Model 11 (Val)
Yokohama Air Group (Tulagi)
 7 Kawanishi H6K4 Navy Type 97 Flying-Boat Model 22 (Mavis)
 9 Nakajima A6M2-N Navy Type 2 Floatplane Fighter Model 11 (Rufe)
At Rabaul
 2 Kawanishi H6K4 Navy Type 97 Flying-Boat Model 22 (Mavis)
 2 Kawanishi H8K1 Navy Type 2 Flying-Boat Model 11 (Emily)

September 20, 1942

11th Air Fleet (Rear Admiral Tsukahara)
25th Flotilla (Rear Admiral Yamada)
Tinian and 6th Air Groups (Rabaul)
 45 A6M2 Zeros
2nd Air Group (Rabaul and Buin)
 26 A6M3 Zeros
 5 Vals
 1 Irving
 6 Flying Boats
26th Air Flotilla
4th Air Group (Rabaul)
 34 Land-based bombers (31 Bettys)

October 31, 1942

25th Air Flotilla (withdrawn November 10 and relieved by 21st Air Flotilla)
 67 A6M2/3 Zeros (40 operational)
 27 Vals (25 operational)
Reinforcements: November 5–9, 51 Zeros including
 26 of the 252nd Air Group; November 10,
 10 Vals of the 956th Air Group
26th Air Flotilla
 64 Bettys (36 operational)

R Area Air Force (Rekata Bay)

21 operational floatplanes (mostly Rufes and Mitsubishi F1M2 Navy Type 0 Observation Seaplanes (Pete)

Reinforcements: November 6, 3 Rufes, 8 Petes; November 13, 12 more floatplanes

Cactus Air Force

Brigadier General Roy Geiger

September 20, 1942

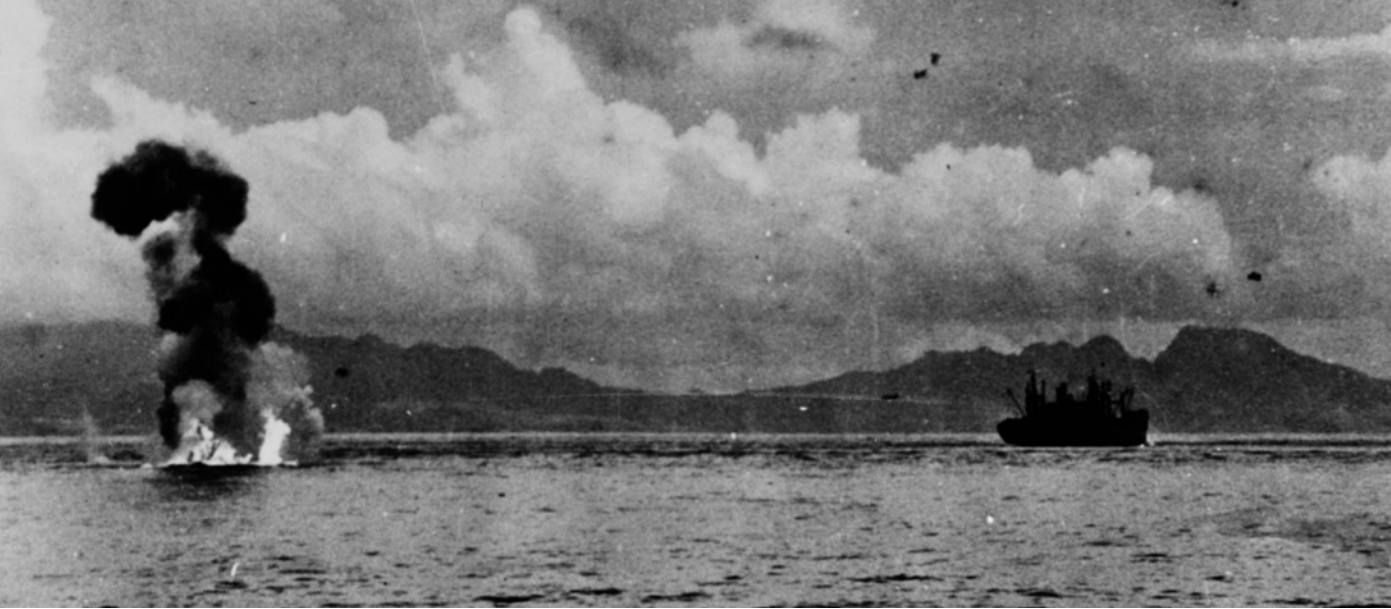
36 Grumman F4F-4 Wildcats (VMF-223, VMF-224, VF-5)
25 Douglas SBD-3 Dauntlesses (VMSB-231, VMSB-232, *Enterprise* Flight 300, VS-3)
7 Grumman TBF-1 Avengers (VT-8)
3 Bell P-400 Airacobras (67th Fighter Squadron)

October 31, 1942 (operational aircraft only)

34 Wildcats (VMF-121, VMF-212)
19 Dauntlesses (VMSB-141, VB-6, VS-71)
7 P-39/400 Airacobras (67th Fighter Squadron)

Squadrons assigned to the Cactus Air Force

Marine Fighting Squadron 223 (VMF-223) August 20 to October 11
Marine Scout Bombing Squadron 232 (VMSB-232) August 20 to October 2
67th Pursuit Squadron, USAAF August 22, 1942 to February 8, 1943
Enterprise Flight 300 (August 24 to September 27)
VMF-224 August 30 to October 16
VMSB-231 August 30 to October 16
Scouting Squadron Three (VS-3), USN September 6 to October 17
Fighting Squadron Five (VF-5), USN September 11 to October 16
Torpedo Squadron Eight (VT-8), USN September 13 to November 16
VMSB-141 September 23 to November 19
VS-71, USN September 28 to November 7
VMF-121 October 9 to December
Bombing Squadron Six (VB-6), USN October 14 to November 3
VMF-212 October 16 into 1943
VMSB-132 November 1 into 1943
VMF-112 November 2 into 1943
VMSB-131 November 12 into 1943
VMSB-142 November 12 into 1943
Carrier Air Group 10 (VF-10, VB-10, VS-10, VT-10) November 13–16



THE CAMPAIGN

The battle for Henderson Field

The Japanese attack on August 8 against American shipping off Guadalcanal, using Bettys as torpedo bombers, was the costliest day of the entire campaign for the Betty force. Of the 23 bombers which attacked, 18 were shot down. Here is a Betty burning after crashing with an American transport ship in the background. (Naval History and Heritage Command)

Initial actions

On July 31, the Americans began to soften up Tulagi. For the next week the 11th Bomb Group and its B-17s conducted daily raids with between two and 11 aircraft. On August 4, a Japanese floatplane conducted a ramming attack, which accounted for a B-17. These attacks and other indications suggested an American move against Tulagi and maybe the new airfield on Guadalcanal, but Japanese commanders on Rabaul refused to accept that an American counterattack was imminent.

The American landings on August 7 took the Japanese totally by surprise and were unopposed in the air. Wildcats from the carrier *Wasp* strafed and destroyed all seven Mavis flying boats and eight Rufe float fighters of the Yokohama Air Group.

The Japanese were quick to react with all available forces from Rabaul. What ensued was a microcosm of the main themes evident for the rest of the air campaign. The Japanese had actually planned to attack the Allied base at Milne Bay on New Guinea when they received word of the American invasion at Tulagi and Guadalcanal. Rear Admiral Yamada, commander of the 25th Air Flotilla at Rabaul, quickly decided to send the Milne Bay attack force to Guadalcanal instead. To mount this immediate attack, he allocated 27 Betty bombers escorted by 18 Zeros. The problem was that the bombers were loaded with bombs to attack Milne. The optimum load would have been torpedoes to use against the ships off Guadalcanal, but Yamada chose not to delay the attack to change loads. He also ordered nine Val dive-bombers to take part in the attack. This was a rash decision since the aircraft did not have the range to fly to Guadalcanal and return to Rabaul and they were sent without a fighter escort. The Vals were ordered to make for the half-finished airstrip at Buka off the northern end of Bougainville Island in the northern Solomons. Since it was unlikely that they would reach Buka, the Japanese set up a designated ditching area near Shortland Island off the southern end of Bougainville.

The attack began at 0930hrs when the Bettys took off from Rabaul followed by the escort Zeros and unfortunate Vals. The Allied coast watcher near Buin sighted the bombers and signaled at 1037hrs that 24 bombers were headed south. The Japanese attack force arrived over the waters off Guadalcanal at 1315hrs. Dropping their bombs from altitude against the ships offshore through heavy clouds, they failed to score a single hit. The Wildcats from the American carriers arrived after the bombers had conducted their attack and the American fighters tore into the Japanese formation. The first to attack were eight Wildcats from VF-5 based on *Saratoga*.

The leader of the first division of Wildcats ripped into the Bettys and claimed two, but then the Zeros intervened and shot down two Wildcats and damaged another. The leader, Lt. James Sutherland, was engaged by Sakai and shot down. Before bailing out, Sutherland observed that his aircraft had been hit over one hundred times. Following his victory over Sutherland, Sakai spotted and shot down a Dauntless dive-bomber from *Wasp*. He went on the attack against another group of American aircraft, which he identified as more Wildcats. In fact, they were Dauntlesses from *Enterprise*. The rear gunners of the dive-bombers hit Sakai's Zero, smashing his canopy and inflicting a serious head wound and taking his sight from one eye. Remarkably, Sakai was able to return to Rabaul. The second division from VF-5 split up with two attacking the escorting Zeros while the other two went after the bombers. Zeros shot down both Wildcats which attacked the bombers, but two more Bettys were damaged.

Ten more Wildcats from VF-6 based on *Enterprise* made contact with the Japanese raid and caught it as it was retreating. The Americans chased the retreating Japanese as far north

This photograph shows the Marine landing on Lunga Point on August 7. Japanese opposition was negligible. The Marines captured the unfinished airfield, which was located in the clear terrain on the right center of the photograph, on the second day. (Official Marine Corps photo courtesy of Marine Corps History Division)



as New Georgia in the central Solomons. Four more Wildcats were dispatched by Zeros, but they accounted for two Zeros and three Bettys shot down and another two bombers forced to ditch.

The final part of the Japanese raid featured the nine Vals, which arrived at about 1500hrs. Using the clouds to avoid interception, they managed to hit destroyer *Mugford* with a single bomb. After completing their attack, the Vals were set on by 16 Wildcats. Five were shot down and the other four forced to ditch.

The day was costly for both sides. Of the 18 Wildcats which attacked the Bettys escorted by Zeros, nine were shot down. In return, only two Zeros were shot down, but the ace Sakai was out of the fight. Of the 27 Bettys, five were lost with several others damaged. All nine of the Vals were lost.

The next day, following the arrival of additional Bettys from the Misawa Air Group, the Japanese returned. This time, the Japanese used 27 of the 29 operational Bettys at Rabaul escorted by all 15 available Zeros. The Japanese plan was to attack the American carriers if possible, but to return to attack shipping off Guadalcanal if the carriers were not located. The strike force took off at 0800hrs, preceded by five reconnaissance aircraft to scout for the carriers. The American carriers were not located so the bombers, all carrying torpedoes, headed for Guadalcanal. Just before noon, the 23 remaining Japanese bombers emerged over Florida Island having avoided all but three of the Wildcats positioned over Savo Island. Before the Bettys reached their attack positions, the three Wildcats were able to intercept and claimed one Zero and three Bettys. This was a minimal toll compared to the carnage caused by American antiaircraft fire against the Bettys, which were flying at extremely low altitude. Only five Bettys survived to return to Rabaul, and two Zeros also were missing. In return, no American aircraft were lost. In exchange for losing 18 aircraft, the Bettys did succeed in torpedoing destroyer *Jarvis* and one of the doomed Bettys crashed into transport *George F. Elliot*, causing a severe fire. Neither ship survived.

This remarkable photo shows four Bettys flying at low altitude on the August 8 raid. Since the photo was taken from a USN ship, the potential vulnerability of the bombers to even short-range weapons like the 20mm gun, which was prevalent even in 1942, is evident. Note the shells bursts from 5-inch shells in the background. (Naval History and Heritage Command)





After capturing the airfield on August 8, the Marines moved quickly to complete building it. There was a 180-foot gap in the center of the runway, which the Marines filled using captured Japanese equipment. By August 18, the airfield had reached its full length of 3,778 feet and had a width of 150 feet. The surface comprised dirt or gravel, initially not even with metal grating. The airfield lacked taxiways, revetments, and a drainage system. The first aircraft to use the field was McCain's personal PBY, which flew in on August 12. The airfield was pronounced operational and was named Henderson Field after Marine Major Lofton Henderson who had been lost at the battle of Midway.

After the costly raids of August 7 and 8, Japanese aircraft continued to monitor events on Guadalcanal. No aircraft were over the island on August 9; on the following day the Marines noted aircraft overhead, but none dropped a bomb. This brief lull ended when

This photograph shows one of the 18 downed Bettys from the August 8 raid. The view is from an American destroyer which had to kill the Japanese crew after they engaged the destroyer with pistols. (Naval History and Heritage Command)

The first dogfight

The F4F Wildcats of VMF-223 arrived on Guadalcanal on August 20. The next day they had their first brush with the supposedly invincible A6M "Zero" fighter. Thirteen Zeros arrived near Savo Island just after noon where they were engaged by four Wildcats led by Captain John L. Smith, commander of VMF-223. The Japanese thought they were facing 13 Wildcats. In the ensuing dogfight, the Japanese claimed four Wildcats destroyed and another two as probably shot down. In fact, all four of the Wildcats were hit, and two were so damaged that they never flew again. The other two Wildcats, including Smith's, returned safely and all four Marine pilots survived. None of the Zeros was lost. The outcome of the Cactus Air Force's first dogfight was decidedly in favor of the Japanese, but Smith was impressed that the Wildcat could take so much damage and still keep flying and he also noted that the Marine aviators had great confidence in the rugged fighter.





Jim Laurier



This is the aftermath of the attack by the Ichiki Detachment against the Marines along Alligator Creek (better known as the battle of the Tenaru River) on the night of August 20–21. The battalion-sized Japanese force was virtually annihilated. This set the pattern for a series of fruitless Imperial Army offensives to crush the Marines on Guadalcanal. (Official Marine Corps photo courtesy of Marine Corps History Division)

six Zeros strafed the airfield on August 11. The next day, three Bettys bombed west of the Marine perimeter.

For the next week, the Japanese conducted daily raids around noon. The Bettys initially attacked from 10,000 feet, but when the 90mm guns opened up, the Japanese started to bomb from 25,000 feet. The bombing raid on August 18 by eight Bettys cratered the airfield giving Marine engineers their first practice at filling holes.

On August 20, the character of the campaign changed. Escort carrier *Long Island* steamed to within 190 miles of Guadalcanal and began launching the 19 Wildcats of VMF-223 and the 12 Dauntlesses of VMSB-232. The following day, the newly arrived Marine aviators got their first taste of combat. The Japanese had detected the presence of *Long Island* and a fleet carrier on August 20. On August 21, they launched 26 Bettys and 13 Zeros to attack these lucrative targets. The Japanese failed to find the carriers, but the Zeros went looking for a fight over Guadalcanal. They were intercepted by four Wildcats and a fight took place at about noon near Savo Island. The 13 Zeros claimed four Wildcats and two more probably shot down. In fact, all four Wildcats were hit and two were so damaged they never flew again. No Zeros were lost. The fact that all four pilots survived gave encouragement to the Marines.

The battle of the Eastern Solomons

The first big test of the Cactus Air Force soon followed. Initially caught off guard by the American invasion, the Japanese prepared a counteroffensive to sweep what they still assessed as a very small Marine force off the island. For the operation, the Combined

Fleet gathered a force of three carriers (fleet carriers *Shokaku* and *Zuikaku*, and light carrier *Ryujo*) embarking a total of 171 aircraft. This force had the mission of neutralizing American naval forces operating near Guadalcanal in support of the Marines. A second part of the operation was to move a convoy with three transports carrying 1,500 troops to the island. The introduction of the Marine aircraft on Guadalcanal presented the Japanese with a new problem since the airfield had to be neutralized before the convoy could safely approach the island. This task was given to the 11th Air Fleet, but the Japanese developed a back-up plan to use carrier airpower to put the airfield out of action if the land-based aircraft from Rabaul failed to do so.

The landing of the convoy was originally scheduled for August 25, but the problem of neutralizing Henderson Field threw the timeline into confusion. Admiral Tsukahara preferred to use his aircraft to strike Henderson Field instead of providing direct air cover to the convoy. His attempt to hit the airfield on August 22 was turned back by bad weather. The same thing happened the next day. After these failures, he proposed that the Combined Fleet's carriers be given responsibility for covering the convoy on August 24. This was not to the liking of the Combined Fleet, which wanted to keep the presence of the carriers hidden, since American carriers were believed to be operating in the area. With the requirement to support the convoy still unfulfilled, a compromise plan was developed in which the Japanese carriers would support the convoy if the American carriers had not been located by August 24.

The Americans knew that a major Japanese operation was under way but were unsure of the location and numbers of Japanese carriers committed to the operation. Three carriers, *Saratoga*, *Enterprise*, and *Wasp* were in the area, but the lack of intelligence or any detection of Japanese carriers prompted the release of the *Wasp* task group to go to Noumea for refueling. This left two carriers to handle the reinforcement convoy, which was judged to be sufficient. On the morning of August 23, one of McCain's PBVs spotted the reinforcement convoy 250 miles north of Guadalcanal. Vice Admiral Frank Fletcher, commanding the carrier force, decided to strike the convoy in the afternoon with 31 Dauntless dive-bombers and six Avengers from *Saratoga*. The strike was unsuccessful since the Japanese convoy had turned north after being spotted and the American aircraft were unable to locate it in the bad weather. The strike landed on Henderson Field that evening.

The Cactus Air Force was also ordered to strike the Japanese convoy. At 1630hrs, nine Dauntlesses escorted by 12 Wildcats took off and headed north. They were also unable to find the convoy in the murky clouds, and all returned to Henderson Field safely.

The next day, August 24, witnessed the third carrier battle of the war. With *Wasp* out of the fight, *Saratoga* and *Enterprise* were left to face the three Japanese carriers. In order to fulfill the mission of supporting the convoy, the commander of the Japanese carrier force detached light carrier *Ryujo* to conduct a raid on Henderson Field. This was not a deliberate attempt to offer *Ryujo* as a lure as is often depicted in accounts of the battle. The effect was much the same though. PBVs spotted *Ryujo* at 0935hrs, but never detected the presence of the two fleet carriers. Fletcher delayed sending a strike against the light carrier while waiting for information on more important targets. *Saratoga's* strike aircraft returned to their carrier from Guadalcanal at 1105hrs and were sent out to hit *Ryujo* at about 1340hrs. Though *Shokaku* was later located by Dauntless scout planes, Fletcher decided to not recall the strike headed for *Ryujo*. *Saratoga's* aircraft made short work of *Ryujo*, hitting her with as many as three bombs and a torpedo. She sank at 2000hrs.

The Japanese spotted the two American carriers at 1400hrs and launched a 73-aircraft strike in two waves. Though Fletcher had 53 Wildcats on combat air patrol (CAP), the radar-controlled interception of the Japanese strike was largely ineffective. *Enterprise* was struck by three bombs from the first strike. The second strike failed to find the wounded carrier. Heavy aircraft losses caused the Japanese to break off the battle. The American response against



The Dauntless dive-bombers from Marine and Navy squadrons provided the Cactus Air Force with a formidable strike capability. In addition, the Dauntless was used in reconnaissance and ground support missions. Here a sizable percentage of the Cactus Air Force's Dauntless force is seen in the open next to the airstrip. There were no proper dispersal areas or revetments for most of the campaign. (Official Marine Corps photo courtesy of Marine Corps History Division)

the main Japanese carrier force was uncoordinated and ineffective. Twenty-five aircraft were launched, but none found the Japanese carriers and instead they settled on attacking and damaging seaplane tender *Chitose*.

The role of the Cactus Air Force in the battle was relatively minor. The first action came in the afternoon when *Ryujo*'s strike arrived over Guadalcanal. The Japanese carrier launched 15 Zeros and six B5N2 "Kates" just after noon and they arrived in the area of Guadalcanal two hours later. The 15 Zeros were divided into a close escort of six Zeros for the Kates and a strafing force of nine Zeros. The entire notion that such a small strike could neutralize the airfield or destroy enough aircraft to accomplish the same end was quickly shown to be unwise. The strike came in at 9,000 feet and met fierce opposition in the form of 16 Wildcats and two P-400s. At 1430hrs, the six bombers released 36 132lb bombs near the 90mm battery but did no damage. In the ensuing dogfight, both sides made wild claims. The Japanese claimed 15 Wildcats and the Americans claimed nine bombers and seven Zeros. Actual American losses were three Wildcats shot down with one of the pilots surviving. Actual Japanese losses were only three Zeros and four Kates, but the surviving aircraft were all forced to ditch when they discovered that *Ryujo* had been sunk. This apparent victory gave the inexperienced Marine fighter pilots confidence that they could handle the supposedly invincible Zero.

The following day the Cactus Air Force played the lead role in defeating the Japanese effort to get a small convoy to Guadalcanal. The prospects for getting the convoy through had been pegged on neutralizing the small American air force on Guadalcanal, but on top of *Ryujo*'s

attack failing, the 11th Air Fleet had also had to cancel its mission to hit Henderson on the 24th owing to poor weather conditions. Nevertheless, when the Japanese aviators reported putting both American carriers out of commission during the carrier battle, the convoy was ordered to head south toward Guadalcanal late on the 24th. To cover the convoy's transit, the Japanese conducted a bombardment with three destroyers just after midnight on the 25th. The bombardment was a total failure. An attack by Japanese floatplanes against the airfield was also ineffective. At 0230hrs, three Dauntlesses conducted a rare night flight to attack the retreating destroyers. They found their target, but their 500lb bombs all missed. At 0400hrs, three dive-bombers from *Enterprise* flying from Henderson Field tried the same thing. This time, one of the destroyers was lightly damaged, but one Dauntless was lost.

The convoy was shadowed by a PBY from about 0230hrs. Meanwhile, eight dive-bombers escorted by eight Wildcats had taken off from Guadalcanal in search of *Ryujo*. This search was fruitless since the carrier had already sunk, and the dive-bombers headed west for the convoy while the fighters returned to Guadalcanal. Five of the eight dive-bombers were Marine aircraft. These targeted the largest warship present, which was light cruiser *Jintsu*. Against no defending fighters and no anti-aircraft fire, one of the Marine pilots placed his bomb in front of *Jintsu*'s bridge, which started fires and killed 24 crewmen. The three Navy dive-bombers went after transport *Kinryu Maru* and one placed a bomb on the ship, which set her afire. This attack prompted the convoy to again head north to get out of range of Henderson Field. One of the escorting destroyers, *Mutsuki*, was alongside the stricken *Kinryu Maru* when three B-17s appeared overhead at 1027hrs. The destroyer's captain assessed that the B-17s were not likely to hit their target and decided not to leave the disabled transport. On this occasion, the heavy bombers delivered their payload with unaccustomed accuracy. One bomb hit the destroyer in the engine room and it sank within minutes taking down 40 men. *Kinryu Maru* was later scuttled by another destroyer.

The Marine aircraft arrived back at Henderson Field just in time to scramble as a Japanese strike of 21 Bettys and 12 Zeros arrived. Though warned by coast watchers about an hour earlier of Japanese bombers headed to Guadalcanal, the Marine fighters could not get enough altitude to attack the Japanese before they accurately dropped their bombs at 1155hrs. Following the raid, nine Marine dive-bombers headed back to the area of the morning's attack on the Japanese convoy but found nothing.

With this, the battle of the Eastern Solomons was over. The first Japanese operation to retake the island was defeated. The Japanese had not crushed the American fleet, neutralized Henderson Field, or reinforced the island. The small American air force on Guadalcanal was proving very difficult to handle. Its very existence complicated Japanese planning and, on August 25, was responsible for the retreat of the Japanese invasion convoy.

Japan's September offensive

Following the failure of the battalion-size attack on August 20–21, the Japanese quickly planned another land offensive to take the airfield. They still failed to understand that an entire Marine division was present on Guadalcanal and Tulagi. For their next offensive, they believed that an attack in brigade strength would suffice to push the Marines off the island. To move this force to the island, the Tokyo Express ran overtime while the 11th Air Fleet intensified efforts to knock out Henderson Field.

On August 26, the 11th Air Fleet returned with 17 Bettys and nine Zeros. This, time, a coast watcher report was sufficient to get 12 Wildcats to interception altitude by the time the bombers arrived just after noon. The bombers dropped accurately enough to set off fuel near the airfield. After the usual overclaiming, the Marine fighters recorded another successful day. For the loss of a single Wildcat and its pilot, they accounted for two bombers shot down, two more crash-landed and probably written off, three Zeros

destroyed, and another damaged. A Japanese raid the following day was forced to turn back owing to bad weather. The combination of combat and operational losses was taking a heavy toll on the small Wildcat force. Of the 19 which arrived on August 20, only five were flyable ten days later.

But the Japanese were suffering losses as well. The constant toll from the Wildcats on Guadalcanal had reduced Japanese air strength on August 29 to only 88 aircraft (41 Zeros, 37 Bettys, six Vals, one reconnaissance aircraft, and three flying boats) of which only half were operational. To deliver the knockout blow to Henderson Field, the Japanese planned a substantial reinforcement of the 11th Air Fleet. By bringing in aircraft from all over the Empire, and excluding losses, by September 20 it was planned that Rabaul would be stuffed with 93 long-range Zeros, 38 short-range Zeros, 81 Bettys, six Vals, four reconnaissance aircraft, and 14 flying boats. Almost as importantly, on September 8 the Japanese approved construction of an airfield on Buin on the southeastern part of Bougainville. Flying in aircraft was easy but getting proper support from ground crews continued to be a problem and serviceability rates suffered accordingly. In addition, attrition was sustained, not just when the Japanese attacked Guadalcanal, but also when Allied aircraft from the 5th Air Force attacked Rabaul.

The Japanese had little luck on their early bombing raids at Henderson Field since it was proving impossible to knock out the airfield with bombs dropped from Bettys from 25,000 feet. Arguably, the best way to destroy the Cactus Air Force was to shoot it down in the air. However, the relatively small number of operational long-range Zeros was a constant limiting

This Wildcat crash-landed after being damaged in a dogfight. It looks like the pilot survived to walk away from his sturdy fighter. If the damaged aircraft could not be returned to service, it was placed in the bone yard to supply parts for other aircraft. (Official Marine Corps photo courtesy of Marine Corps History Division)



factor on Japanese hopes of gaining air control over Guadalcanal. To rectify that situation, on August 28 30 Zeros from carriers *Shokaku* and *Zuikaku* were detached and landed at Buka. The carrier pilots were reputed to be among the best in the entire Imperial Navy.

To complement the efforts of the aircraft from Rabaul, the Japanese created a formation of floatplanes called the R Area Air Force. It flew out of bases at Shortland Island south of Bougainville and later on Rekata Bay on Santa Isabel Island northwest of Guadalcanal. The base at Rekata Bay opened on September 5. This force comprised 52 floatplanes drawn from four seaplane tenders and had the task of conducting nightly harassment missions over Guadalcanal and providing local air defense and antisubmarine patrols. Since floatplanes were used to provide air cover for Tokyo Express runs or convoys headed to Guadalcanal, the R Area Air Force was a regular opponent of the Cactus Air Force.

In order to move Major General Kawaguchi Kiyotaki's 35th Infantry Brigade to Guadalcanal, the Tokyo Express was ramped up. On August 28, the Cactus Air Force caught some destroyers too close to Guadalcanal in the evening. Eleven Dauntlesses (six Marine, five Navy) were launched to attack them. The Navy pilots drilled destroyer *Asagiri* with two bombs, which broke the ship in two and took a high toll of the crew and the 150 Imperial Army soldiers on board. The Marines damaged destroyers *Yugiri* and *Shirakumo*. Only a single destroyer was left undamaged. This fiasco threatened the success of the Tokyo Express until cooler heads prevailed, and regular runs resumed, with the correct timing to make American aircraft on Guadalcanal a non-threat.

On August 29, the Japanese mounted a major attack with 18 Bettys and 22 Zeros from the carrier air groups flying from Buka. Given a warning by the coast watchers, all ten available Wildcats were waiting for them when they arrived just before noon. The elite carrier pilots did not destroy a single Wildcat; in return the Americans accounted for one Betty and a Zero and another Betty was forced to crash-land on Buka. Japanese bombing was accurate enough to destroy two Wildcats and a Dauntless on the ground. That evening, two American transports arrived, one carrying the first radar for Guadalcanal. To protect the transport carrying the radar, which had run aground, 14 Dauntlesses were sent up at night to look for Japanese destroyers known to be in the area. The aircraft found nothing in the dark, but their mere presence forced the Japanese destroyer commander to abort his mission to attack American shipping.

The Japanese changed tactics on August 30 when they sent down Zeros alone to conduct a fighter sweep. Eighteen Zeros were employed, and these were spotted by the coast watchers which gave the Americans time to scramble 11 P-400s and eight Wildcats. The Zeros initiated their attack against the seven P-400s flying at 14,000 feet and shot down two. But the eight Wildcats flying at 28,000 feet exacted a terrible revenge when they conducted a diving attack which caught the Zeros totally by surprise and downed eight. In the ensuing dogfight, another two P-400s were lost, and two Wildcats were damaged so badly they never flew again. Another Zero was forced to ditch on the way home, so the engagement was another victory for the Marines. This demonstration of the futility of using the P-400s to take on the Zeros meant that they were used in a ground support role from this point on.

The Japanese planned a second raid for August 30. A group of 18 Bettys and 13 Zeros arrived at 1510hrs. The Wildcats were on the ground refueling and were unable to intercept. The Japanese spotted destroyer transport *Calhoun* just off Lunga Point and went after her. On this occasion, the Japanese displayed impressive accuracy hitting a small, fast target from 15,000 feet with four direct hits and several near misses. The old destroyer sank within minutes.

Finally, August 30 saw the arrival of the first Marine air reinforcements. Col. Wallace led in the rest of MAG-23 comprising 19 Wildcats of VMF-224 and 12 Dauntlesses of VMSB-231. VMF-224 got a harsh introduction to Guadalcanal when three aircraft disappeared on a false

alarm interception mission the following day. One of the pilots returned a week later having walked 30 miles through the jungle behind Japanese lines.

The following day, the Imperial Navy scored a major success when one of its submarines torpedoed carrier *Saratoga*, placing her out of action for three months. Twenty-one Dauntlesses and nine Avengers were sent to Espiritu Santo and the ship's fighter squadron was dispatched to Efate. All of these aircraft eventually ended up on Guadalcanal.

The Japanese build-up continued into September. On September 1, three Dauntlesses attacked the Tokyo Express at 0130hrs and damaged a destroyer. The next day, 18 Bettys escorted by 20 Zeros (13 from the carrier air groups) bombed Henderson Field with some effect. The new pilots of VMF-224 damaged three Bettys and VMF-223 accounted for two Zeros. No Wildcats were lost. That night, Dauntlesses damaged the large minelayer *Tsugaru*. The 11th Air Fleet was hampered by bad weather during the first week of September and was unable to attack Henderson Field. On September 3, Brigadier General Geiger arrived on Guadalcanal. The following day, the remaining Zeros based on Buka returned to their carriers. During their short tenure against the Cactus Air Force, they lost half of their number for little effect.

During the lull of Japanese air raids, the Cactus Air Force continued its campaign against Japanese reinforcements headed to Guadalcanal. On September 3, American aircraft spotted a Japanese barge convoy in the central Solomons. In the morning, 11 Dauntlesses attacked, followed by seven Dauntlesses and two Wildcats in the afternoon. Morning and afternoon attacks were conducted the next day against the same target. On September 5, the convoy was caught in the morning just north of Guadalcanal's northwest coast and was strafed heavily by Wildcats and P-400s. The Imperial Army's idea of complementing Tokyo Express runs with barge convoys was quickly shown to be impractical and too vulnerable to air attack.

On September 5, the 11th Air Fleet returned with 27 Bettys and 15 Zeros. Bad weather forced them to drop their bombs away from the airfield before the arrival of 18 intercepting Wildcats. Japanese records confirmed the loss of a single Betty and damage to six more. The Marines lost a single Wildcat and its pilot; another three were damaged and of these, one never flew again.

For the next couple of days, the daily Japanese raids went after targets on New Guinea. On September 8 some Bettys were dispatched with torpedoes to attack American shipping supporting an attack by the Marines on Guadalcanal. The Bettys missed the shipping, and a Wildcat interception failed with five being lost owing to takeoff and landing accidents.

On the following day, the Japanese returned to Guadalcanal in strength, but the daily attack again focused on shipping. The raid consisted of 27 Bettys and 14 Zeros. Fifteen Wildcats rose to intercept. The Americans shot down three bombers and damaged another six. Five more Wildcats were lost and only two pilots survived uninjured; another was lost in a takeoff incident.

With the Japanese land attack growing near, the 11th Air Fleet stepped up the pace of operations. The September 10 raid consisted of 21 Bettys escorted by 15 Zeros. Eleven Wildcats took off to meet the Japanese, but only five completed the interception. Three Bettys were destroyed at the cost of a single Wildcat downed. This left the Cactus Air Force with only 11 operational Wildcats.

On September 11, the Japanese sent down 27 Bettys with 15 Zeros. The Americans sent up 12 Wildcats to intercept. The Marines' aviators claimed six bombers, but Japanese sources confirm one Betty and one Zero lost. The one Zero was shot down by Major Galer (commander of VMF-224), but in return the Zeros forced him to ditch in the waters offshore. Galer survived the experience. On this day, the Bettys dropped some of their bombs on the ridge about a mile south of the airfield. This was no accident since Kawaguchi had picked this as his avenue of attack against Henderson Field. Later that day, 22 Wildcats from *Saratoga's*



VF-5 arrived providing the Cactus Air Force with a significant addition of combat power and a tangible enhancement of morale.

The 11th Air Fleet returned on September 12 with 25 Bettys and 15 Zeros. The Cactus Air Force made a major effort with 12 Marine Wildcats and 20 fighters from VF-5. In the ensuing interception, five Bettys and a Zero were lost in exchange for one Wildcat and its pilot. That night, Kawaguchi launched his ground attack. The Japanese succeeded in getting an attack force of three battalions undetected to a point just one mile south of Henderson Field. The initial attack misfired when the troops got lost in the jungle and failed to attack as planned. Kawaguchi was forced to regroup for another attempt the following night.

September 13 was an eventful day. The action began when two Japanese twin-engine reconnaissance aircraft escorted by nine Zeros flew down to Henderson Field to see if the Kawaguchi Brigade had gained control of the airfield. They got their answer when 28 Wildcats came up to intercept. Four Zeros were destroyed in exchange for two Wildcats shot down and two more damaged. The unsuccessful reconnaissance mission was followed by the daily bombing raid with 26 Bettys and 12 Zeros. It bombed Taivu Point since there was still some confusion at Rabaul whether the airfield was held by the Japanese or not. Seven Marine and nine Navy Wildcats intercepted. One Betty and one Zero were shot down in exchange for four Wildcats (with three pilots surviving) and another badly damaged. In the evening, two Rufes (Zeros with floats) from the R Area Air Force made a surprise and unopposed appearance and shot down a Dauntless right over the airfield. A VF-5 Wildcat

This is the high ground known as "Bloody Ridge" located about one mile south of Henderson Field. The Japanese chose this location for their main attacks in September and October. On both occasions, they were stopped cold by the same combination of factors – heavy jungle (visible below the ridge), which greatly impeded Japanese command and control, steadfast Marine defenders, and Marine firepower. (Official Marine Corps photo courtesy of Marine Corps History Division)

attempting to scramble was also lost. During the day, reinforcements arrived for the Cactus Air Force in the form of 12 Dauntlesses from VS-3 and six Avengers from VT-8.

On the night of September 13–14, Kawaguchi finally got his force in place for the attack to seize Henderson Field. Command and control problems meant only two of his three battalions actually attacked. Defending Bloody Ridge south of Henderson Field were two under-strength Marine battalions. With the benefit of outstanding leadership and artillery support, the Marines held. Parts of a Japanese company broke through to Fighter One and overran part of an engineer unit camped there, but overall the attack was a total failure.

The extent of the Japanese disaster was not immediately apparent at Rabaul. On the morning of September 14 three Rufes arrived over the island only to be shot down by VF-5 Wildcats. At noon, another reconnaissance plane escorted by six Zeros tried to ascertain whether the airfield had been captured or not. VMF-223 Wildcats destroyed the reconnaissance aircraft plane and VMF-224 Wildcats bagged a Zero. Two Wildcats were lost to operational causes. During the day, 18 new Wildcats reached Guadalcanal as replacement aircraft for the two Marine fighter squadrons.

In a new wrinkle, the Japanese conducted a major floatplane attack later in the day. Two Rufes and 17 Petes with bombs tried a twilight attack and were met by four VMF-224 and six VF-5 Wildcats. The Americans claimed nine of the maneuverable Petes and a Rufe for no losses to themselves. Actual Japanese losses were one Rufe and four Petes.

The first two weeks of September marked the most intense period yet in the life of the Cactus Air Force. The Americans had more than held their own. Since September 1, the Japanese had lost 15 Bettys, ten Zeros, one “Irving” reconnaissance aircraft, four Rufes,

These are dead Japanese soldiers from the Kawaguchi Brigade after its unsuccessful attack against Marine positions along Bloody Ridge during the nights of September 12–14. Even if the Japanese had broken through to the airfield, it would have been impossible for them to hold it. (Official Marine Corps photo courtesy of Marine Corps History Division)



and four Petes for a total of 34 aircraft. Aircrew losses were heavy, particularly among the bomber crews. The high operational tempo left the Japanese aircrews exhausted, especially the 25th Air Flotilla, which had been in action since April. In exchange, the Cactus Air Force lost 28 Wildcats (only 15 in air combat), 11 Dauntlesses, and two P-400s. Though the ratio of aircraft losses was about even, the Cactus Air Force was unable to prevent the build-up of Japanese ground forces on the island which preceded the failed September 12–14 offensive.

The September lull

From September 14 to 27, there were no Japanese air raids on Henderson Field. Both sides used this respite to reinforce and reorganize. On September 16 the headquarters of the 21st Air Flotilla under Rear Admiral Ichimaru Rinosuke reached Kavieng with 23 Bettys of the Kanoya Air Group. Nine Zeros of the air group arrived at Rabaul. The next day, 21 Zeros of the 3rd Air Group arrived at Rabaul. The 11th Air Fleet ordered a major restructuring of its Rabaul-based formations on September 18. All fighter, dive-bomber, and patrol aircraft were placed under command of the 25th Air Flotilla. All Bettys were moved under the 26th Air Flotilla. On September 20, total strength at Rabaul was 117 operational aircraft with 31 Bettys and 45 long-range Zeros. More reinforcements arrived on September 23 in the form of 20 Bettys from the Takao Air Group. On September 27, 12 Vals arrived, nine from the new 31st Air Group. The most worn-out units were sent to Japan to refit. These included the 4th, Yokohama, and Chitose Air Groups.

The Cactus Air Force was also reinforced, but not to the same extent. On September 18 six more VT-8 Avengers arrived. This brought total air strength on Guadalcanal on September 20 to 71 aircraft of all types. During the rest of the month, the Americans added five Wildcats, 11 Dauntlesses of VMSB-141, four Avengers, and three P-400s.

During the lull, the Japanese continued Tokyo Express runs and the dive-bombers from Henderson Field became more proficient in night attacks. Four Japanese destroyers made a run down the Slot on the night of 20 September. One was bombed by seven Navy and three Marine Dauntlesses and damaged. The next night, four more destroyers made the same run. One was damaged by strafing and the entire group was forced to return to Shortland before all their supplies could be unloaded. On September 24, two more Japanese destroyers were damaged by nine Dauntlesses and one Avenger. Tokyo Express runs were canceled for the rest of the month because the moon was moving to a full phase.

The October battles

In response to the failure of the Kawaguchi Brigade's attack, the Imperial Army and Navy developed plans to reinforce Guadalcanal for a larger land offensive. On September 16, orders were issued to move 17,500 men with all their artillery from the 2nd and 38th Divisions to the island. The attack was planned for about October 20, which meant that all reinforcements had to be landed by October 13 or 14 in order to give them time to move to their jump-off positions. Initially, it was planned to move the men to Guadalcanal by 27 destroyers and two seaplane carriers supported by barges to lift the artillery too big to fit on destroyers. The key part of the plan was a renewed effort to neutralize Henderson Field. This was to be accomplished by more intense air attacks starting on September 26 and artillery fire directed against the island from artillery scheduled to be landed by early October. Buin Airfield was scheduled to be finished on September 26, which would facilitate intensified air attacks.

This plan for a gradual build-up was quickly rendered irrelevant. The full moon canceled runs late in September, which put the Tokyo Express behind schedule. The plan to use

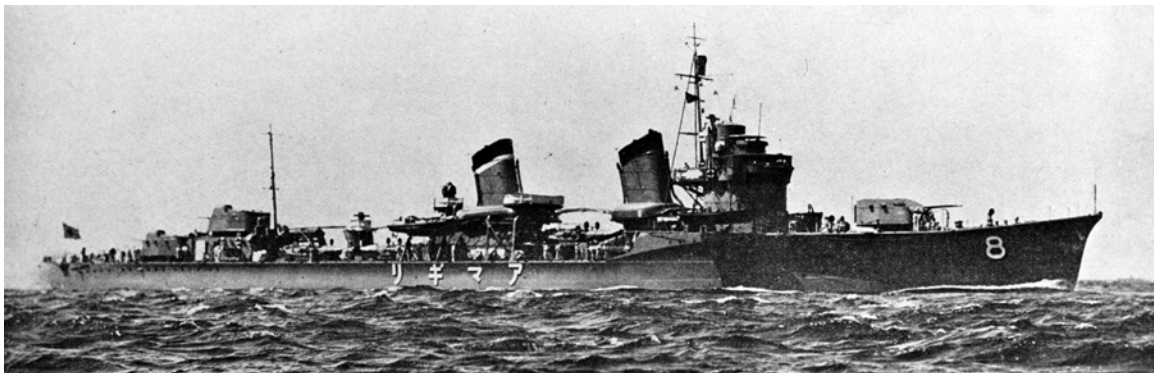
barges to move heavy equipment to Guadalcanal from bases in the central Solomons proved unfeasible. To move the required number of men to Guadalcanal, the IJN wanted a complete phase of moonless nights, which meant a one-month delay to the scheduled October 20 attack. The Imperial Army refused to countenance a one-month delay and proposed that reinforcements be moved to the island by means of a convoy of large, fast transport ships. The two services agreed on a plan to move reinforcements to Guadalcanal by a variety of means. The centerpiece of the plan was the High-Speed Convoy to move massive amounts of men and supplies direct to the island. Supplementing this was the resumption of the Tokyo Express on October 1 for 14 consecutive nights, six barge loads a night from October 1, and the use of the 11,300-ton 28-knot seaplane carrier *Nisshin* on October 3 and 6 to carry heavy artillery.

The key to this plan remained the suppression of Henderson Field. This was left in the hands of the 11th Air Fleet in Rabaul by means of intensified attacks on the airfield including, for the first time, night bombing. Since the Japanese were not sure the neutralization of Henderson Field could be accomplished by bombing, they searched for another way to neutralize the airfield. The Combined Fleet had been considering the use of large warships to bombard the airfield. Yamamoto approved a plan for two Kongo-class battleships to shell the airfield two days before the arrival of the High-Speed Convoy with their massive 14-inch guns. The next night, heavy cruisers from Rabaul would shell the airfield again with their 8-inch guns. The reinforcement phase was scheduled to be complete by October 14 with October 20 remaining the planned day of the offensive.

The air campaign kicked off on September 27, a day late owing to poor weather. This attack was mounted by 17 Bettys and 38 Zeros. Given adequate warning from a coast watcher, the Americans made an all-out effort to repel the attack. Seventeen Marine and 18 Navy Wildcats were dispatched to intercept. The intercept occurred before the bombers joined with the fighters, so the Wildcats had a brief opportunity to pummel the bombers. Two were shot down, one forced to ditch, and 11 more damaged. One Zero was also destroyed, all for no loss to the Americans. On this occasion Japanese bombing was precise. The remaining bombers dropped on the airfield and destroyed one Dauntless and two Avengers, and damaged four more Dauntlesses and three Avengers.

The air action of September 28 was one of the biggest of the entire campaign. Twenty-seven Bettys roared down from Rabaul escorted by 42 Zeros. On their way down, two Bettys and two Zeros were forced to return because of mechanical issues and the entire formation was spotted by coast watchers at 1258hrs. Thirty-four Wildcats rose to intercept and, just like the previous day, inflicted heavy losses on the bombers. The fighter pilots claimed a staggering 23 Bettys but actual losses were five Bettys, two more forced to ditch, and almost all the others damaged to some degree. Demonstrating the Wildcat's effective tactic of not engaging the Zeros in a dogfight was the fact that neither side lost any fighters in this engagement, though five Wildcats and four Zeros were damaged. The only American aircraft lost was a single Dauntless caught by the Zeros on a radar calibration mission. That afternoon, the Americans gained four Avengers from VT-8 and six Dauntlesses from VS-71 and VS-3.

The first two days of the renewed air attack on Guadalcanal had not gone well for the Japanese. Of the 42 Bettys which reached Guadalcanal, ten did not return to Rabaul. This loss rate was obviously unsustainable. The 11th Air Fleet determined that the reasons for the high losses were coordination problems between the bombers and fighters. It also confirmed the effectiveness of the American tactic of concentrating on the bombers and avoiding combat with the Zeros. The Japanese decided to change tactics to give the Zeros more chances to score and to reduce bomber losses. Small groups of bombers would be used to lure up the Wildcats to face a large escort. To preserve the bomber force, raids would be limited to nighttime.



The Japanese tried these new tactics so the Zeros could get at the Wildcats on September 29. The result was disappointing. Nine Bettys flew toward Guadalcanal and turned back 60 miles from Henderson Field. The escorting 27 Zeros waded into the 33 Wildcats conducting the intercept and claimed 11 and a Dauntless. The actual results did not reflect a rich harvest for the Japanese fighters. Only a single Navy Wildcat was shot down, along with two Zeros.

For the next two days, there was no raid on Henderson Field. On the night of October 1, the Tokyo Express ran with four destroyers. Five Dauntlesses and five Avengers were sent aloft to disrupt the delivery of more troops to Guadalcanal. One destroyer was damaged and forced to turn back, but three Avengers got lost in the dark and were forced to ditch. This left a single operational Avenger on Guadalcanal.

On October 2, the Japanese resumed their new fighter sweep tactic and had some success. On this occasion, 36 Zeros were sent south with nine Bettys to act as the bait. The Bettys got separated from the fighters around Buka and returned early with nine of the Zeros. The remaining 27 Zeros headed toward Guadalcanal and were not detected on radar until 1230hrs. This did not give the Wildcats enough time to get to their interception altitude. The 22 Marine and 14 Navy Wildcats were caught at lower altitude by the Zeros who shot down six Wildcats, killing four pilots. The two pilots who survived their aircraft being shot down were the commanders of the two Marine fighter squadrons, Majors Galer and Smith. In addition, the Zeros accounted for two Dauntlesses. The Americans claimed four Zeros, but Japanese records indicate only one was lost with four more damaged. The Tokyo Express run that night by five destroyers was unimpeded by Cactus Air Force aircraft owing to poor weather.

The next day, October 3, was important for both sides. The Japanese planned a major Tokyo Express run with *Nisshin* carrying artillery with the range to shell Henderson Field and nine destroyers carrying men and supplies. The Japanese planned a major raid to cover the nocturnal run of the Tokyo Express. The raid was mounted by 15 Bettys escorted by 27 Zeros. Their intent was to use the bombers again as bait, but by this time the Americans were getting wise to that tactic. With a coast watcher report at 1027hrs, followed by a radar plot which indicated that the bombers turned back over the Russell Islands, the Marines had time to send their 29 Wildcats to an even higher altitude to gain altitude superiority over the approaching Zeros. When the Zeros arrived over the airfield, nine were sent down to strafe the airfield. Of these, one was shot down and one so badly damaged it was scrapped when it returned to Rabaul. The other 18 Zeros were hit by the Wildcats using their height advantage. Total Zero losses were nine shot down, one heavily damaged, and three others less heavily damaged. Of the 27 Zeros sent down, half were destroyed or damaged. In return, only two Wildcats were lost. This disaster and bad weather gave Henderson Field five days' respite.

Amagiri was a Special Type destroyer used extensively during the campaign on Tokyo Express runs.

Maneuverable and fast, destroyers were extremely difficult to hit with aircraft but the Cactus Air Force did succeed in sinking four destroyers during the campaign. (Naval History and Heritage Command)

The rest of the Cactus Air Force was also busy that evening. After receiving another six Dauntlesses from VS-71 and three Avengers from VT-8 during the day, that evening eight Dauntlesses and three Avengers attacked *Nisshin* at 1725hrs headed to Guadalcanal. The fast seaplane carrier avoided any damage. Two Bettys bombed the airfield that night with no effect. At 2220hrs, five Dauntlesses were sent up to harass the Tokyo Express. Two dive-bombers scored a near miss on *Nisshin*, which forced her to depart before all her artillery and men had been unloaded. The seaplane carrier was caught again the next morning 140 miles northwest of Guadalcanal, this time by seven Dauntlesses and four Avengers. The Japanese covered her withdrawal with floatplanes, and these forced the American dive-bombers to evade into clouds thus losing contact on the seaplane carrier. The Avengers dropped their bombs but missed. A flight of B-17s returning from a bomb run over Buka wandered into the area, and a Japanese floatplane deliberately rammed one of the heavy bombers; both aircraft were lost, but the Japanese crew survived.

Henderson Field experienced no raids on October 4 and 5. On the night of October 4, five Tokyo Express destroyers were not molested by aircraft from Guadalcanal. The following day, Ghormley was aggressive for one of the few times during his command. The Cactus Air Force had a minor part to play by hitting Raketa Bay. The raid was turned back by weather, and one Dauntless was lost. The other parts of the effort, a B-17 raid on Buka and the carrier *Hornet* hitting Shortland, were also derailed by weather. Meanwhile, the Tokyo Express continued its efforts with six destroyers. Nine Dauntlesses found the Japanese during the early evening still 150 miles from Guadalcanal. They heavily damaged one destroyer, which had to be taken in tow, and inflicted enough damage on another to make her turn back. The other three ships pressed on to Guadalcanal. Geiger mounted a major effort to find them with 15 Dauntlesses and three Avengers, but the effort was unsuccessful, and two Avengers were lost.

The debacle on October 5 and the failure of the barge system to deliver anything to Guadalcanal meant the Japanese were falling behind schedule in bringing reinforcements to the island. In response, Yamamoto gave his commanders an additional day, and a light cruiser and another seaplane carrier, *Chitose*, were assigned to reinforcement duties. Rain covered the movement of six destroyers to Guadalcanal on the night of October 6. The following night, five more destroyers moved troops to the island. On October 7, 11 P-39s and two Avengers arrived on Guadalcanal.

With the aggressive Vice Admiral Kusaka now in charge, the 11th Air Fleet planned a two-phase effort to cover the movement of a large Tokyo Express mission. The first phase was a raid on Henderson Field from Rabaul, but this was canceled because of poor weather. The second phase was the movement of 15 Zeros to the new base at Buin to give direct air cover to the Tokyo Express. This turned into a fiasco when seven of the fighters were heavily damaged when they tried to land at the soggy airfield. This left the Tokyo Express mission in danger and only under the cover of floatplanes. The reinforcement effort featured *Nisshin* and five destroyers, one assigned to provide the seaplane carrier direct support and the others to carry troops and supplies. This force was attacked 140 miles from Guadalcanal by seven Dauntlesses and four Avengers with 11 Wildcats providing escort. The Wildcats took care of the floatplanes, downing three, but the dive-bombers and bombers were unable to hit anything. One dive-bomber and a Wildcat were lost. The Tokyo Express dropped off its cargo on Guadalcanal and then was attacked by nine Dauntlesses escorted by six P-39s on the morning of October 9. A Dauntless was lost, and the dive-bomber pilots again failed to score.

On October 9, the Japanese conducted a fighter sweep with 27 Zeros. The Americans responded with 27 Wildcats and eight P-39s, but heavy clouds prevented an interception. One Wildcat failed to return. That same day, 20 Wildcats of VMF-121 arrived, along with five Dauntless and three Avenger replacement aircraft.

That night, the Tokyo Express delivered almost 1,200 men in a light cruiser and seven destroyers. The mission was undisturbed until the next morning when 15 Dauntlesses and six Avengers,

OPPOSITE

The principal Japanese staging base for Tokyo Express runs to Guadalcanal was the anchorage at Shortland Island, less than 300 miles from Henderson Field. In this view, several Japanese ships are visible in the anchorage on October 9, probably transports of the High-Speed Convoy. Some of the convoy's escorting destroyers are also present. (Naval History and Heritage Command)

escorted by 15 Wildcats and eight P-39s, attacked the Japanese force headed back to Shortland. This was the largest mission ever mounted by the Cactus Air Force, but, in spite of the impressive numbers of aircraft, little was accomplished. Only a single destroyer was damaged, continuing the trend of American dive-bomber and bomber pilots being unable to hit the maneuverable destroyers squarely. One Dauntless and a P-39 were lost. The only air cover provided by the Japanese had been four floatplanes from the R Area Air Force. All were shot down by American fighters, leaving the R Area Air Force without any operational aircraft. This formation was clearly unable to perform its mission of providing evening and morning air cover to the Tokyo Express.

The October 10 Tokyo Express run by three destroyers was not interrupted by Cactus Air Force aircraft. The Japanese were still behind in their efforts to move the



required reinforcements for the planned October 20 offensive. Added to this problem was the continued inability to move adequate supplies of food to the island. With the reinforcement plan required to be completed by October 15, Yamamoto had to step up efforts to move reinforcements and supplies to the island. This prompted another major air-sea battle.

The Japanese planned one of the largest-ever Tokyo Express runs on October 11. Two seaplane carriers, *Nisshin* and *Chitose*, escorted by six destroyers, were ordered to carry an array of heavy equipment, personnel, and supplies. Supporting this important Tokyo Express run was a naval bombardment of Henderson Field by three heavy cruisers with special 8-inch shells. The reinforcement group would be given air cover by the A6M3 short-ranged Zeros moved to Buin Airfield.

The 11th Air Fleet planned to change tactics once again to catch the Cactus Air Force by surprise. The usual fighter sweep would be mounted first, and a second wave of Bettys and Zeros would follow up when the American fighters were still on the ground refueling and rearming.

The clever Japanese plan was spoiled by weather and the continuing problem of coordinating their bombers and fighters. The fighter sweep of 17 Zeros was detected on radar at 1220hrs and the Americans scrambled a large force of eight Navy and 31 Marine Wildcats, and 12 P-39s/P-40s. Heavy clouds above the airfield prevented the 15 Wildcats of the newly arrived VMF-121 from joining the fight, and in any event the weather prevented either side from making an interception. Some 45 minutes later the main attack of 45 Bettys and 30 Zeros began to show up, but this did not provide enough time separation to catch the Americans on the ground. Eighteen Bettys came below the clouds to bomb and were set upon by Wildcats, which claimed eight, and P-39s, which claimed a ninth bomber destroyed. Japanese records admit to only a single Betty lost and three damaged. The Zero escort lost no aircraft but dispatched only one Wildcat and one P-39. Once again, the Japanese had failed to deal the Cactus Air Force a serious blow at a critical juncture, but the air activity did serve to keep the American strike aircraft busy and unable to go after the large Japanese reinforcement group headed for Guadalcanal.

The reinforcement group successfully reached Guadalcanal without being attacked by the Cactus Air Force. Zeros from Buin provided air cover during the day until dark with the last group of six Zeros being ordered to stay over the ships until dark and then ditch to be picked up by destroyers. Five of the pilots were not recovered. The movement of the reinforcement group was spotted by American scout aircraft during the afternoon, and this prompted the first American naval operation at night to contest the waters around Guadalcanal since the ill-fated battle of Savo Island in August.

In the battle of Cape Esperance, it was the Japanese who were surprised, and this provided the Americans with the edge. Of the three Japanese heavy cruisers present, one was sunk, one heavily damaged, and the third escaped. A Japanese destroyer was also sunk. This prevented the planned naval bombardment of Henderson Field. USN losses were one light cruiser heavily damaged and a destroyer sunk.

The next morning, October 12, the Cactus Air Force compounded the Japanese disaster. At 0700hrs, five Dauntlesses attacked heavy cruiser *Kinugasa*, the only cruiser left undamaged from the battle, but failed to hit her. At 0820hrs, 11 Dauntlesses found two destroyers and attacked them unsuccessfully. A follow-up attack by seven Dauntlesses and six Avengers with torpedoes, escorted by 14 Wildcats, conducted a well-coordinated attack on the same two ships. One of the Avengers placed a torpedo into destroyer *Murakumo*. At 1545hrs, 11 Dauntlesses and an Avenger, escorted by eight Wildcats and four P-39s, returned to finish off the destroyer. They found that two more destroyers had arrived to support the damaged *Murakumo*. One of the dive-bombers nailed *Natsugumo* almost amidships, and two more dive-bombers scored near misses. The destroyer sank at 1627hrs. Other dive-bombers hit



Murakumo and set her afire, and she had to be scuttled by a Japanese torpedo. The Cactus Air Force had inflicted its heaviest blows to the Tokyo Express to date accounting for two destroyers sunk and 38 Japanese sailors killed.

The “High-Speed Convoy”

The heart of Yamamoto’s plan to get massive reinforcements to the island had yet to play out. This was the so-called “High-Speed Convoy” comprising six fast transports escorted by eight destroyers. Aboard the transports were six battalions of infantry, artillery, and a company of tanks totaling 4,500 men. The original plan was for the convoy to wait until Henderson Field had been neutralized, but the loss of the Japanese advanced positions nearest the airfield along the Matanikau River prompted the Imperial Army to request that the convoy be run through, whether the Cactus Air Force had been suppressed or not. The IJN agreed and sent the convoy south. On the afternoon of October 13, American search aircraft spotted it some 200 miles from Guadalcanal.

The 11th Air Fleet was already busy on the 13th trying to support the arrival of the reinforcement convoy by mounting two operations against Henderson Field. The first raid comprised 27 Bettys and 18 Zeros. It took an evasive path from Rabaul, evaded the coast watchers, but was detected on radar. The warning was inadequate for a full interception so few of the 42 Wildcats and 13 P-39s made contact. Only a single Betty and Zero were shot down for the loss of one Wildcat whose pilot survived. The Japanese bombing of the airfield

This Dauntless was destroyed on the ground at Henderson Field, probably after the battleship bombardment on the night of October 13–14. Only 20 Dauntlesses were lost on the ground during the entire campaign. (Official Marine Corps photo courtesy of Marine Corps History Division)

by 24 Bettys was very accurate. The bombers succeeded in placing 13 craters in the runway, which caused extensive damage to the steel matting. One B-17 was destroyed and 12 more aircraft slightly damaged; 5,000 gallons of gasoline went up in smoke. The day's second raid consisted of 15 Bettys (one aborted) and 18 Tinian Air Group Zeros. The formation was detected by radar and 12 Wildcats of VMF-121 rose to intercept. The Wildcats gained attack position but were thwarted by the Zero escort. A single Wildcat piloted by Joe Foss was damaged and forced to land, and no Zeros were shot down. The 14 bombers dropped at 1400hrs but caused only slight damage.

On the evening of the 13th, the Japanese unveiled another surprise. At 1818hrs, a shell from a 150mm howitzer positioned west of the Matanikau River hit the airfield. This was the first time the Japanese had shelled the airfield. With the western end of Henderson Field under fire, flight operations were shifted to Fighter One, which was farther east.

The biggest Japanese surprise of the entire campaign had yet to be revealed. This was the use of battleships to pound Henderson Field into oblivion. The operation was well planned and was the most successful IJN battleship operation of the entire war. Fast battleships *Kongo* and *Haruna* were charged to conduct the execution of the airfield escorted by a light cruiser and nine destroyers. Each battleship carried eight 14-inch guns and *Kongo* had 104 special shells that spread 470 incendiary sub-munitions over a wide area. *Haruna* carried another 189 high-explosive rounds. The bombardment was planned to smother a 2,200-square-meter area, which included Henderson Field and Fighter One. The accuracy of the shelling would be ensured by the presence of *Kongo's* gunnery officer on one of the four floatplanes assigned to illuminate the airfield and correct the fall of shot. In addition, a gunnery officer from battleship *Yamato* was posted on the tallest high feature, Mount Austen, to provide precision adjustments.

What ensued was the heaviest pounding any Americans endured during the entire war. The shelling began just after 0133hrs from *Kongo*, with *Haruna* joining a minute later. The Japanese soon found the range and sent salvo after salvo into the airfield complex. Aircraft, fuel and ammo dumps, and the personnel quarters north of the airfield in the coconut groves were all hit and fires turned night into day. At 0213hrs, the shelling temporarily stopped as the battleships turned around. The resumed shelling was less effective because of all the smoke and dust surrounding the target and the fact that the special bombardment ammunition was gone, and the battleships were now firing armor-piercing shells into the soft ground. The last of 973 14-inch shells was fired at 0256hrs.

The results of the bombardment were devastating. Of the 39 Dauntlesses present, only seven were operational in the morning. None of the Avengers could fly. Fighter One was not as hard hit so 24 of the 42 Wildcats based there were operational. The 67th Fighter Squadron added another four operational P-400s and two P-39s. Almost all the aviation fuel was destroyed. The radio station was hit, and it took three hours before external commanders were even aware of the bombardment. Personnel casualties were astonishingly low at 41 dead, but among these was the leadership of VMSB-141.

The morning search from Henderson found the convoy only 140 miles from Guadalcanal. With *Hornet* out of position refueling, Henderson Field would have to fend for itself. With only seven dive-bombers and no fuel, the situation looked hopeless. The only help possible was from other South Pacific air units. Admiral Fitch immediately ordered the last 17 Dauntlesses on Espiritu Santo to Guadalcanal and VMF-212 with its 20 Wildcats. All Marine and Army Air Force transports were put to work ferrying fuel to the island.

As the Cactus Air Force struggled to regain its balance, the Japanese maintained the pressure. Just after noon, 26 Bettys escorted by 18 Zeros bombed the airfield against no fighter opposition. Twenty-five Wildcats scrambled earlier in the morning in response to a false alarm and landed before 1100hrs. Twenty-five more were scrambled just before noon

but were unable to intercept the first raid of the day. The Bettys dropped their bombs in the face of 90mm antiaircraft fire but caused no damage. No aircraft on either side were lost. A second raid at 1300hrs ran into the 25 Wildcats launched earlier. The attack consisted of 12 Bettys and 15 Zeros. The Americans claimed a major success with nine Bettys and three Zeros downed. Actual losses were four Bettys and no Zeros; American losses were one Wildcat and one Airacobra. The Japanese were on notice that the Cactus Air Force was down but not out.

The most pressing need for the Americans was to get attack aircraft repaired and fueled to attack the convoy. By afternoon, four Dauntlesses were ready with a large escort of 24 fighters. This group attacked at 1545hrs but was unable to hit any of the transports. One Wildcat was lost to the convoy's air cover of floatplanes and Zeros. Ground crews were able to get nine Dauntlesses ready for an evening strike, this time escorted by eight Wildcats and seven Airacobras. The only air opposition was put up by seven Petes. The American dive-bombers were able to inflict only light damage to a destroyer and one Wildcat and two Airacobras were lost to antiaircraft fire and operational causes.

The convoy arrived at its destination off the northwest coast of Guadalcanal at midnight. No American aircraft flew that night, so unloading of the transports proceeded without interference. In addition, the Tokyo Express made a major run that night with *Nisshin*, two light cruisers, and three destroyers. Iron Bottom Sound was busy that night with Japanese ships. Another Japanese task force of two heavy cruisers and two destroyers made a return visit to Henderson Field and shelled the strip with 752 8-inch shells in a bombardment which ended at 0217hrs. At the end of the bombardment, only three Dauntlesses remained flyable and Henderson Field remained unusable. All flight operations were conducted from Fighter One.

On the dawn of October 15, the Japanese looked to be in control of the reinforcement battle. All six transports had made it to Guadalcanal and were busy unloading troops, equipment, and supplies only a few miles from the Marines' perimeter. Above the transports were Zeros from carriers *Junyo* and *Hiyo* and floatplanes from the R Area Air Force. The Americans continued to scramble to find aircraft and fuel to attack the Japanese. As these became available, they were committed to piecemeal attacks through the day.

The first attack was mounted at 0600hrs by six Wildcats from VMF-121. The Wildcats strafed the transports and one was lost. The next effort was made by the three available Dauntlesses. One fell into a shell crater while taxiing to Fighter One, another crashed while taking off, and the third got aloft but found its hydraulic system was inoperable. The pilot

Attack on the "High-Speed Convoy"

On October 15, the remnants of the attack aircraft from the Cactus Air Force attacked the Japanese "High-Speed Convoy" of six transports and eight destroyers. The transports arrived off Guadalcanal at midnight and immediately began to unload. When dawn broke, the Marines found the transports protected by Zeros from carriers *Hiyo* and *Junyo* and floatplanes from the R Area Air Force. Japanese bombardments of Henderson Field by battleships and cruisers the previous two nights left few American aircraft operational and little fuel. The fuel problem was solved when one of Geiger's staff officers remembered the location of an emergency fuel reserve. As the Marines searched for fuel, the mechanics worked furiously to return damaged aircraft to flyable condition. Eventually, Geiger prepared a coordinated strike of 12 Dauntlesses escorted by eight Wildcats, three P-39s, and a single P-400. Geiger added his personal PBY-5A flying boat to the strike flown by his personal pilot Major Jack Cram. Using the slow and plodding PBY in daylight was considered suicidal, but the situation demanded every aircraft be committed. The PBY was fitted with two torpedoes and Cram was given his first-ever lesson on how to conduct a torpedo attack. The plan was for the Dauntlesses to attack first and draw attention away from the low-flying PBY. Cram put the aircraft into a dive and reached 240 knots, beyond the PBY's safe speed. He succeeded in launching his two torpedoes at transport *Sasago Maru*. The ship was set afire, though it is not known if the cause was a Dauntless bomb or one of Cram's torpedoes. Wildcats and Zeros were exchanging fire behind the lumbering PBY. After delivering his attack, Cram turned left to regain the Marine perimeter. One Zero riddled the PBY and closed for the kill. A Wildcat got behind the Zero and brought it down on the edge of Henderson Field. Both Cram and his PBY survived this harrowing experience.





Jim Laurier



This is a hangar destroyed by Japanese bombing on October 15. The combination of intensive bombing, naval bombardment, and artillery interdiction of the airfield during the period October 13–15 represented the nadir of the fortunes of the Cactus Air Force. (Official Marine Corps photo courtesy of Marine Corps History Division)

proceeded to attack the transports alone with his landing gear down and no flaps. After a series of piecemeal attacks, Geiger planned a large coordinated attack at about 1030hrs. Using fuel from a just-discovered emergency reserve, the American put together a force of 25 aircraft – 12 Dauntlesses, eight Wildcats, three P-39s, one P-400, and Geiger's personal aircraft, a PBV-5A Catalina flying boat. The slow and ungainly PBV was fitted with two torpedoes and the pilot given his first-ever instructions on how to launch a torpedo. This ad hoc force succeeded in hitting transport *Sasago Maru* and setting her afire. The PBV survived the attack and may have been responsible for the damage to the transport. The aircraft returned full of holes.

At 1100hrs, the daily Japanese bomber raid appeared. The 24 Bettys were not opposed by American fighters and dropped on the airfield unmolested, destroying one Wildcat. One Betty was forced to ditch by anti-aircraft fire. At 1150hrs, more bombers made an appearance, but these were 11 B-17s from Espiritu Santo. These hit *Azumasan Maru*. An afternoon attack by the Cactus Air Force hit *Kyushu Maru*. The constant attacks forced the Japanese to suspend unloading by the two remaining transports (one had already finished unloading and had left the area) until 1740hrs when a final unsuccessful attack by four Dauntlesses prompted orders for the transports to depart the area.

The all-out Japanese effort to get a reinforcement convoy to Guadalcanal had proved successful. The best estimates indicate that all 4,500 men got ashore as well as two-thirds of the equipment and supplies. The cost to the Japanese was not cheap – three of the transports were lost. Both sides threw everything they had at the air battles of October 15. The Japanese made an unprecedented level of effort to protect the convoy by flying 112 fighter sorties.

Of these, 44 were from the 11th Air Fleet base at Buin, 36 from the two carriers, and 32 by the R Area Air Fleet. Of these, five Zeros and one Pete were lost. American losses attacking the convoy were four Dauntlesses, two Airacobras, and three Wildcats. It had taken an extraordinary effort with everything from battleships to howitzers on the ground, but Henderson Field had been suppressed long enough to move a major convoy all the way to the island before it underwent serious attack.

Even after the arrival of the High-Speed Convoy, the Tokyo Express continued to deliver additional men and supplies. To support this, the Japanese kept the pressure on the Cactus Air Force. On the night of October 15–16, Yamamoto sent two more heavy cruisers to shell Fighter One. In total, 926 8-inch shells hit the strip.

The pummeling of Henderson Field over several nights by naval artillery was the most effective method so far of suppressing American airpower. This was evidenced by the toll in aircraft. Of the Dauntless force, 13 were destroyed beyond repair, ten needed major work, and 13 could fly again after repairs. Five Avengers had been destroyed and three more needed major repairs. Two B-17s were destroyed. Of the fighter force, six Wildcats were destroyed and three more were repairable. Four P-39s were also written off. Despite the heavy losses, the Cactus Air Force was able to mount 58 sorties on October 16 against the newly landed troops and supplies.

Fitch continued to find more aircraft to feed into the furnace of Guadalcanal. VMF-212 arrived on October 16 with its 19 Wildcats. The skipper of VMF-212, Lt. Col. Harold Bauer, caught eight Vals from Buin, which had just bombed a destroyer transport carrying fuel to Lunga Point. Bauer won the Medal of Honor by downing three Vals. Seven Dauntlesses also arrived on October 16. At this time, VMF-224 and VMSB-231 departed. With MAG-23 gone, MAG-14 took over. The last pilots of VF-5 also departed. This left only the 67th Fighter Squadron from the original Cactus Air Force units.

On October 17, *Junyo* and *Hiyo* conducted an antishipping strike with 18 Zero and 18 Kates. The strike arrived near Lunga Point at 0720hrs. Eight Wildcats were waiting and accounted for seven Kates and one Zero in exchange for a single Wildcat. The daily bomber raid from Rabaul came in at 1315hrs, but the Wildcats were unable to gain interception altitude. One Wildcat was lost, but antiaircraft fire accounted for one Betty and two Zeros. That night, a major Tokyo Express run of three light cruisers and 15 destroyers reached the island unhindered by air attack.

With the planned date for the Japanese attack approaching, the 11th Air Fleet kept up the pressure on the Cactus Air Force. On October 18, 14 Bettys and seven Zeros conducted the daily raid. The coast watcher on New Georgia provided plenty of warning, which allowed 15 Wildcats to make an interception with a height advantage. In the exchange of fire between the fighters, two Wildcats and a Zero were shot down. Three Bettys followed these down and a fourth never returned to Rabaul. The following day, a fighter sweep of nine Zeros met 16 Wildcats. The Japanese shot down one Wildcat and another was lost to operational causes. The October 19 Tokyo Express mission went awry. Three destroyers started down but were attacked by 12 Dauntlesses still 175 miles from Guadalcanal. Despite the efforts of the defending floatplanes, one destroyer was near-missed and forced to return. When the remaining two destroyers reached Guadalcanal, they were subjected to Dauntless bombs and flares which made them abandon their mission.

The Japanese mounted two raids on October 20. The morning sweep consisted of 15 Zeros and an afternoon raid brought down 25 Zeros and nine Bettys. Losses were light with one Zero and two Wildcats lost. Owing to problems moving the attack force into position, the Japanese were forced to delay their ground attack until October 23. Meanwhile, the 11th Air Fleet kept busy with pre-attack supporting raids. Two raids were mounted on October 21 with a total of 25 Zeros and nine Bettys. The Americans put up 15 Wildcats to contest. Again, losses were light with only one Zero and two Wildcats.

Japanese Forces

Raid 1, October 13

1. Bomber Force (9 each Betty from Kisarazu, Misawa, and 753rd Air Groups; 3 abort)
2. Escort Force (9 each Zero fighters from 3rd and 751st Air Groups)

Raid 2, October 13

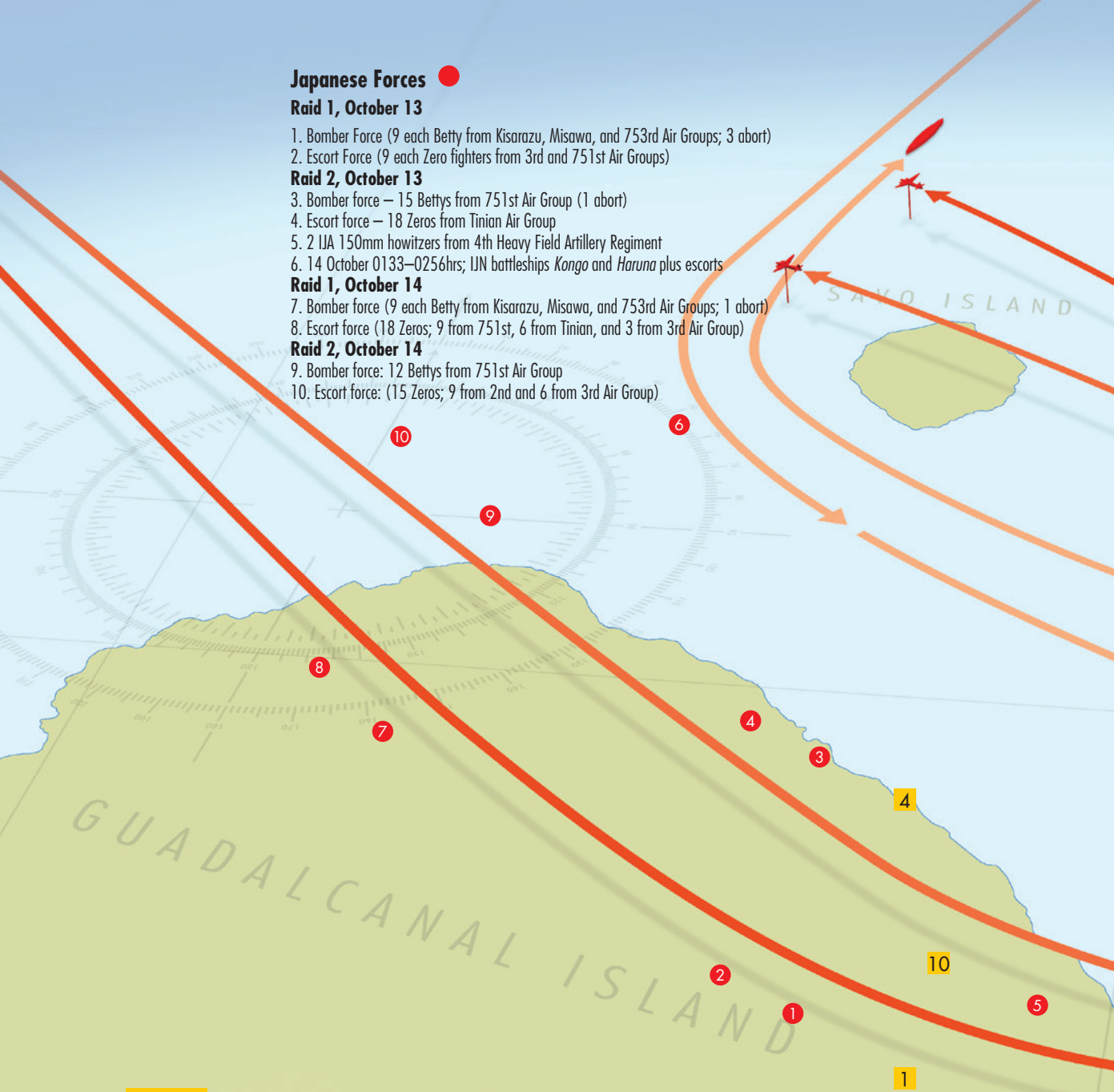
3. Bomber force — 15 Bettys from 751st Air Group (1 abort)
4. Escort force — 18 Zeros from Tinian Air Group
5. 2 IJA 150mm howitzers from 4th Heavy Field Artillery Regiment
6. 14 October 0133–0256hrs; IJN battleships *Kongo* and *Haruna* plus escorts

Raid 1, October 14

7. Bomber force (9 each Betty from Kisarazu, Misawa, and 753rd Air Groups; 1 abort)
8. Escort force (18 Zeros; 9 from 751st, 6 from Tinian, and 3 from 3rd Air Group)

Raid 2, October 14

9. Bomber force: 12 Bettys from 751st Air Group
10. Escort force: (15 Zeros; 9 from 2nd and 6 from 3rd Air Group)



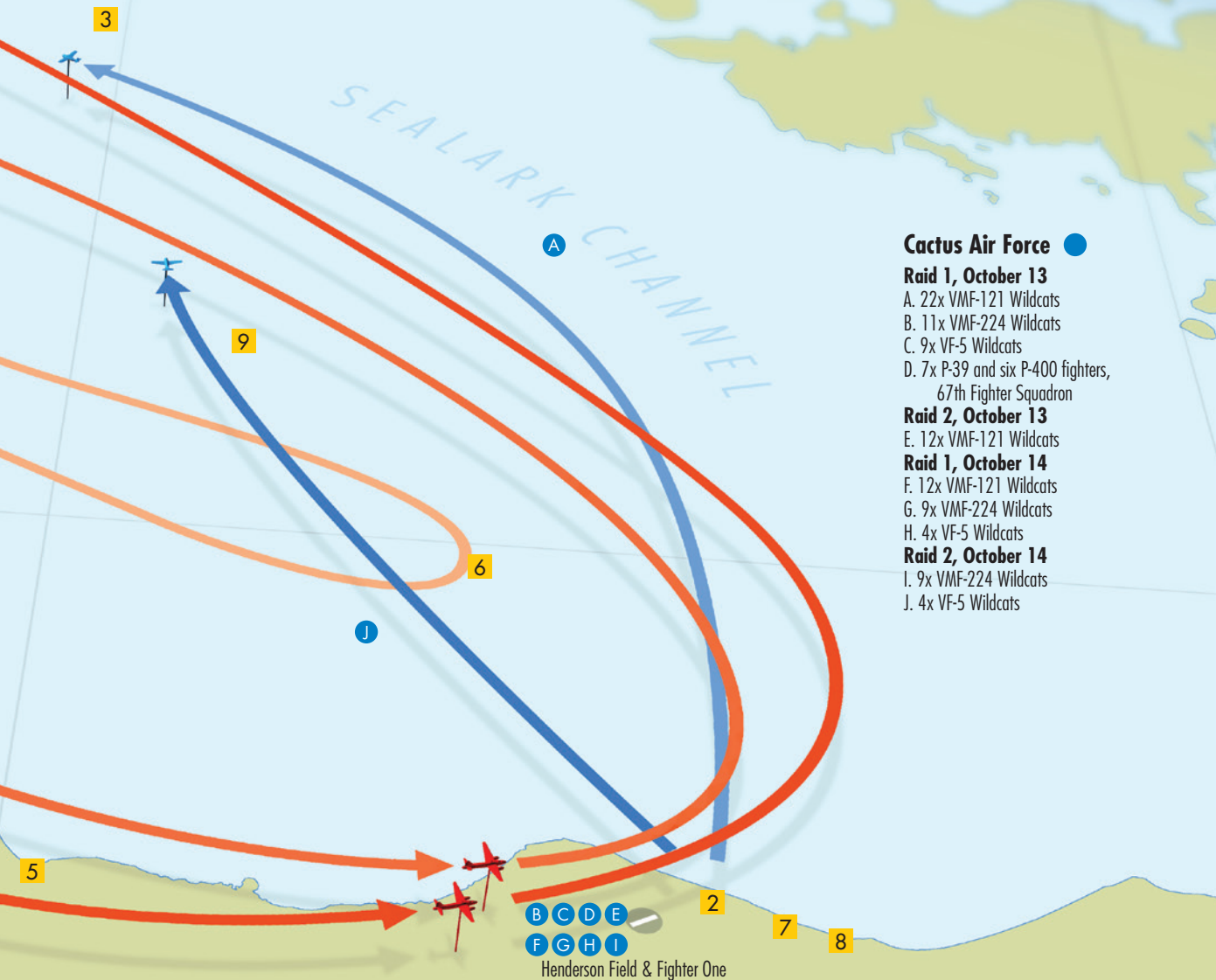
EVENTS

October 13

1. 1130hrs. American radar on Guadalcanal detects the inbound raid. Geiger scrambles a total of 55 fighters — 42 Wildcats from three squadrons and 13 from the 67th Fighter Squadron. The Americans are unable to intercept the bombers before they arrive over Henderson Field.
2. 1202hrs. 24 Bettys drop bombs over Henderson Field and Fighter One with unusual accuracy. The Henderson Field runway is holed, 5,000 gallons of fuel set afire, one B-17 destroyed, and 12 other aircraft slightly damaged.
3. Approximately 1230hrs. Four VMF-121 Wildcats catch up with the retreating Japanese. One Betty is damaged and one Zero is forced to ditch; one Wildcat is also forced to ditch but the pilot is recovered.
4. Around 1400hrs. The second raid of the day is detected on radar at 1335hrs. Twelve VMF-121 Wildcats attempt to intercept but are thwarted by the Zero escort. One Wildcat (piloted by ace Joe Foss) is damaged and forced to return to Henderson Field. The bombers drop their weapons at 1400hrs but cause only slight damage.
5. 1818–1900hrs. Two IJA 150mm howitzers commence the first-ever artillery bombardment of Henderson Field. The howitzers zero-in on the western end of the runway.

Cactus Air Force's lowest ebb

October 13–14, 1942



Cactus Air Force

Raid 1, October 13

- A. 22x VMF-121 Wildcats
- B. 11x VMF-224 Wildcats
- C. 9x VF-5 Wildcats
- D. 7x P-39 and six P-400 fighters, 67th Fighter Squadron

Raid 2, October 13

- E. 12x VMF-121 Wildcats

Raid 1, October 14

- F. 12x VMF-121 Wildcats
- G. 9x VMF-224 Wildcats
- H. 4x VF-5 Wildcats

Raid 2, October 14

- I. 9x VMF-224 Wildcats
- J. 4x VF-5 Wildcats

October 14

6. 0133–0256hrs. IJN battleships *Kongo* and *Haruna* conduct a devastating bombardment of Henderson Field with 973 rounds. Henderson Field's runway is holed 13 times, all fuel is set afire, and few aircraft are left operational. Fighter One suffers less with 18 of 30 Marine Wildcats left operational. Four Bettys conduct harassing attacks until dawn.
7. 0945–1042hrs. 25 Wildcats from VF-5, VMF-121, and VMF-224 are scrambled on a false alert; one Wildcat crashes on landing.
8. 1157–1213hrs. No radar contact is gained on the first Japanese raid of the day. At 1157hrs 25 Wildcats are scrambled but cannot gain altitude to make an interception before the Japanese bombers drop their weapons at 1213hrs. Damage is light; no aircraft are lost by either side.
9. 1302–1310hrs. The second Japanese raid of the day descends from the usual bombing altitude of around 25,000ft to lower altitude. Using an altitude advantage, nine Wildcats from VMF-224 attack the bombers without interference; three are shot down and another is forced out of formation. After the remaining Bettys drop their bombs ineffectually at 1307–1308hrs, four VF-5 Wildcats hit the bombers again as they withdraw and damage four, two of which later ditch or crash land.
10. 14 October. The two 150mm howitzers shell Henderson Field throughout the day.

The aircraft based at Buin took the lead on October 22. A strike of 12 Vals escorted by 12 Zeros were sent to attack shipping off Lunga Point. The Japanese dive-bombers attacked and missed a destroyer. The 29 intercepting Wildcats succeeded in shooting down two Vals.

Kusaka ordered two raids on October 23. In the first, 12 Zeros were sent down on a fighter sweep. The main raid consisted of 16 Bettys escorted by 17 Zeros. This is the day when Lt. Col. Bauer ordered a change in tactics and for his fighter pilots to start dogfighting with the Zeros. The interception was conducted by 24 Wildcats and four P-39s. In the ensuing melee, Bauer's men claimed 21 Zeros and two bombers (actual Japanese losses were six Zeros and one bomber). In return, seven Wildcats were damaged, one so badly it was a write-off. Bauer seemed to have correctly assessed the declining skills of the average Zero pilot.

As the Americans and Japanese struggled for control of the air space above Guadalcanal, the Japanese readied their next ground offensive. The plan for the October attack resembled that of the Kawaguchi Brigade in September with the main attack coming across Bloody Ridge. This was supported by an attack along the coast to draw American attention and reinforcements. The main attack was tentatively set for October 22 but was postponed for a day when the forces moving into position were impeded by virgin jungle. The supporting attack began on the night of October 23 with five battalions and was stopped cold by confusion and Marine firepower. The main force requested another day's delay until October 24.

The principal Japanese attack finally began on the night of October 24 with six battalions in the first echelon pitted against one Marine battalion defending a 2,500-yard front. The attack was a complete fiasco because of terrain and command and control issues. The Japanese regrouped for a new attack the following night. When the main attack finally

Kyushu Maru was one of the six transports in the High-Speed Convoy. On October 15, she was hit by a bomb and beached. This is the transport after the campaign was over. (Naval History and Heritage Command)



went in, it suffered from lack of coordination, which resulted in a series of piecemeal attacks which were easily stopped by the Marines and soldiers. One-third of the Japanese force never attacked.

On the morning of October 25, the Japanese waited for the word that their attack had punched through Marine lines and taken the airfield. To ascertain who held the airfield, a reconnaissance aircraft was sent down to Guadalcanal with an escort of eight Zeros. The Japanese formation reached Henderson Field at 0800hrs; no fighters arose to meet them since rains had inundated Fighter One. The reconnaissance plane made a low-level pass over the airfield and was shot down by antiaircraft fire.

The Cactus Air Force experienced another busy day on October 25 as Yamamoto executed his plan to support the attack and cut off American reinforcements to the island. Five different groups with a total of three light cruisers, one large minelayer, and 15 destroyers were arrayed around Guadalcanal to perform blockade and reinforcement missions. As was the case in September, the IJN received an erroneous report that the airfield was in Japanese hands. This report was quickly rescinded, but it set in motion the movement of several groups toward Guadalcanal. Several destroyers entered Iron Bottom Sound in the morning and commenced shelling Lunga Point. This movement was covered by 27 Zeros between 1000 and 1430hrs. The first group of eight Zeros fought with the first group of four Wildcats to take off.

Once Fighter One was dry enough to permit flight operations, the Wildcats were busy for the rest of the day taking on the flights of Zeros and the daily raid at 1430hrs. The raid consisted of 16 Bettys and 12 Zeros. Of these, two Bettys and a Zero were shot down. Following the raid, Japanese carrier aircraft made another appearance at 1500hrs with 12 Zeros and 12 Vals. These bombed the graveyard of wrecked aircraft without loss. Several times during the day, Zeros strafed the airfield.

At 1300hrs, five Dauntlesses attacked a force of a light cruiser and five destroyers headed inbound to bombard Marine positions. Two bombs were placed on light cruiser *Yura* and a destroyer was damaged by a near miss. The Japanese canceled their bombardment mission, but the Cactus Air Force was not content to let the cruiser get away. At 1415hrs, three P-39s attacked the retreating Japanese force, followed by four Dauntlesses at 1530hrs. *Yura's* crew could not contain the flooding and was preparing to beach their ship. At 1700hrs, the cruiser was subjected to a larger attack by four dive-bombers, four P-39s with bombs, three Wildcats for escort, and later by six B-17s. The attack left *Yura* in flames, and the ship was ordered to be scuttled. The 5,500-ton cruiser was the biggest warship sunk by the Cactus Air Force to date. Aside from the cruiser, American fliers claimed 16 Zeros and five Bettys; Japanese records confirm ten Zeros and two Bettys. The Americans lost only two Wildcats with both pilots surviving.

Another part of Yamamoto's plan called for the main body of the Combined Fleet to destroy American naval forces if they came to the aid of the Marine garrison on Guadalcanal. This resulted in the fourth carrier battle of the war, the battle of Santa Cruz fought on October 26. The Japanese carrier force outnumbered the American carriers four to two. The outnumbered Americans made their problem worse by fighting largely out of the range of friendly air cover, which minimized the role of the Cactus Air Force. The result of the battle was a Japanese victory, the only one of the four carrier battles of 1942. However, the cost was extremely high. Carriers *Shokaku* and *Zuiho* were damaged and sent to Japan for months of repairs. More importantly, the Japanese carrier air groups were crippled by the loss of 97 aircraft and 148 highly trained aircrew. This left only the converted carriers *Junyo* and *Hiyo* remaining, not enough to exploit fully the victory at Santa Cruz.

The battle cost the Americans the carrier *Hornet* sunk and moderate damage to *Enterprise*. *Enterprise* was now the only remaining carrier left in the Pacific and could not be risked. This only increased the importance of Henderson Field.

The Japanese build-up for the November offensive

The shock of another defeat on Guadalcanal drove Imperial Headquarters to a strategic consensus for the first time. The Army had its South Pacific focus on the battle for New Guinea. Now it agreed with the Navy that the battle for Guadalcanal was the decisive battle with the United States that both services had been seeking. The Army believed that it had come very close to victory in the October offensive and the Navy believed it had sunk as many as four American carriers at Santa Cruz. Therefore, conditions seemed ripe for yet another major effort to expel the stubborn Americans from Guadalcanal. To execute a major attack on Guadalcanal required many more troops. The Japanese planned to move the 38th Division to the island and land it to the east of the Marine perimeter and the 51st Division would join with the 2nd Division for another attack from the west. The attack was originally set for late December.

The plan to land the 38th Division to the east of the Marine perimeter was quickly dismissed as logistically unfeasible. Even with this modification, the logistical demands of sustaining the troops already on the island and moving an additional 30,000 men, 300 guns, and 3,000 tons of supplies to the island seemed nearly impossible. Estimates by the Imperial Army and Navy differed, but the Navy believed that 50 transports or 800 destroyer and 20 seaplane carrier runs were required. Both services had different ideas how such a sealift would be best accomplished. The Army wanted to run many convoys with each having a few transports. The Navy preferred a large convoy of many ships with unloading to occur only at night.

The problem with either approach was how to suppress Henderson Field. The 8th Fleet based at Rabaul observed that prolonged suppression had proved impossible and that two days was about as long as operations from Henderson Field could be curtailed. By November 7, the Japanese came up with a plan for a large convoy to reach the island on November 13. Three days before, the 11th Air Fleet would begin efforts to attack the airfield and, the night before, two battleships would conduct a concentrated bombardment of the airfield. Heavy cruisers would repeat the bombardment on the day the convoy arrived.

For the Japanese this was a supreme effort to gain victory. The Americans were aware of the outline of the Japanese plan by November 9 through radio intelligence. Their knowledge included that November 13 was "Z-Day." However, some parts of the plan, most importantly the planned battleship bombardment of Henderson Field, were unknown. Halsey was determined to fight with every resource at his disposal. He had already sent additional Marine and Army troops to the island and continued to funnel aircraft to the Cactus Air Force. His remaining naval assets totaled one carrier (*Enterprise*), two battleships, four heavy and four light cruisers, and 22 destroyers. None of these would be spared in the next weeks.

The Cactus Air Force underwent a major change during the lull before the decisive November battle. Marine Air Group 11 moved to the island beginning on November 1 with the arrival of four Dauntlesses of VMSB-132. On November 2, VMF-112 began to arrive. On November 12, ten Dauntlesses from VMSB-142 arrived along with six Avengers from VMSB-131. During this period, the exhausted VB-6 and VS-71 departed. Henderson Field and Fighter One were expanded and another strip named Fighter Two was opened to the northwest of Henderson. Along with new units came a new commander. Geiger was physically and mentally exhausted by November. In the first week of the month, the newly promoted Brigadier Louis Woods took over.

On October 31, the 11th Air Fleet had 158 aircraft on its rolls with 125 operational. The 25th Air Flotilla flew its last missions on November 9 and was withdrawn to Japan for refitting and replaced by the 21st Air Flotilla under Rear Admiral Ichimaru Rinosuke. The IJN air units also underwent redesignation during this period. The new 252nd Air Group arrived between November 5 and 9 with 26 Zeros (another 25 replacement Zeros also arrived). On November 10 the 956th Air Group arrived with ten Vals. The R Area Air



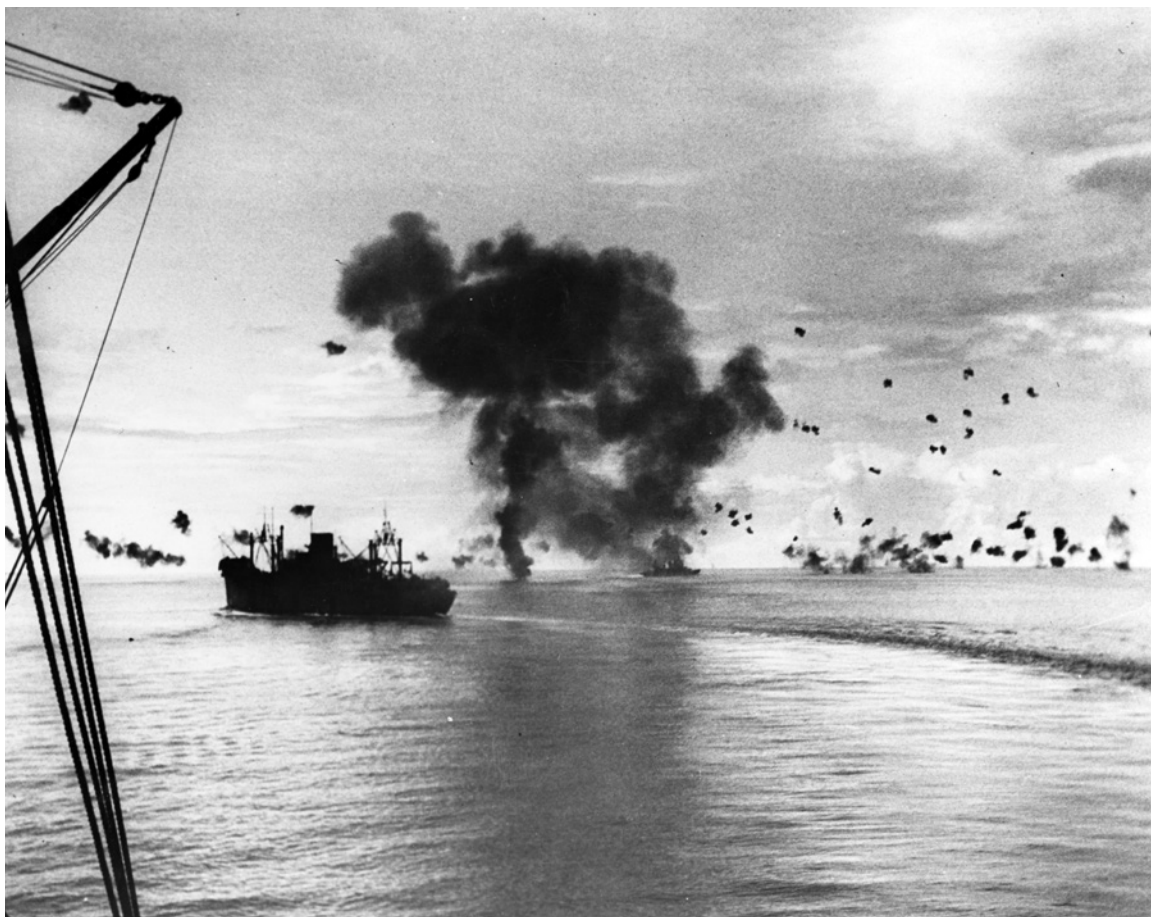
The Nakajima A6M2-N Navy Type 2 Floatplane Fighter Model 11 (Rufe) was a development of the Zero. It could not match the performance of the Zero because of the weight and drag of the floats, which limited top speed to 235 knots. It was originally designed to provide air cover during the early phases of amphibious operations or to smaller islands where construction of airbases was not possible. During the Guadalcanal campaign, the Rufe was used to provide air defense to the Tokyo Express, which it was unable to do since it was outclassed by the Wildcat. (IJN/Public domain)

Force had to be rebuilt since it was down to 21 operational aircraft on October 31. Between November 6 and 13, 23 new floatplanes arrived.

While the Japanese could find new aircraft to throw into the fight, they were having problems finding experienced aircrew. Losses had been very high, and the replacements were younger, less experienced, and less well trained. The 11th Air Fleet reported that the failure of the October grand offensive coupled with heavy losses had caused a drop in morale.

The Japanese November offensive

The Tokyo Express resumed its schedule on November 2 with a large run by one light cruiser and 16 destroyers. Three Dauntlesses were sent out in heavy weather at about 1730hrs to disrupt the Japanese, but none returned. Two more went out at 2100hrs, and only one returned.



In a repeat of the ill-fated August 8 raid, the Japanese tried another low-level torpedo attack by Bettys on USN shipping off Lunga Point on November 12. The results were similar with 11 of 16 Bettys shot down by a combination of Wildcats and antiaircraft fire. This view shows one crashed Betty in the middle of the shot; in the background is heavy cruiser *San Francisco*, which is afire astern after she was hit by another Betty. (Naval History and Heritage Command)

The Japanese were forced to make an emergency Tokyo Express run on November 5 to land troops to prop up the 2nd Division's crumbling front. The light cruiser and 15 destroyers landed the bulk of an infantry regiment of the 38th Division unmolested by American aircraft. During the day, the 11th Air Fleet mounted a raid to support the run with 27 Bettys escorted by 24 Zeros. Heavy clouds prevented the Americans from making an interception or the Japanese from hitting the airfields, but two Bettys were lost to antiaircraft fire.

The Tokyo Express made another run the following night with 11 destroyers and the Cactus Air Force made a major effort to derail it. A strike force of seven Marine Dauntlesses, three Marine Avengers, 21 Marine Wildcats, and nine P-39s caught the Japanese on the evening of November 6 headed for Guadalcanal. The Japanese were covered by the hard-working R Area Air Force with six Rufes and four Petes. The Marine and Army fighters made short work of the floatplanes, claiming a total of 14. Actual losses were bad enough – all six Rufes and one Pete. A total of four Wildcats were lost, three to operational causes. The strike was not a success since only two destroyers suffered light damage and the Japanese successfully landed 80 percent of their troops. The November 8 Tokyo Express run was uninterrupted by American aircraft.

The 11th Air Fleet began to execute its plan to sweep Cactus Air Force from the skies above Guadalcanal on November 10. The first step was a fighter sweep by 18 Zeros. The Americans put up 31 fighters to intercept but only two found the Japanese through the heavy clouds. That night, the Japanese sent five destroyers on supply runs. These were attacked as they approached Guadalcanal by 12 Dauntlesses with no success. The next day the 11th Air Fleet

intensified its efforts. The first attack of the day was conducted by nine Vals escorted by 18 Zeros from Buin at 0940hrs. The Vals selected shipping off Lunga Point for attack but only achieved a single near miss on a transport. Twenty-one fighters came up to intercept and the Americans claimed one Val and four Zeros. On this occasion, the Zeros got the best of the Wildcats shooting down six American fighters and killing four of the pilots. In return, the Japanese lost two Zeros and five of the vulnerable dive-bombers. The main event of the day was the noon raid by 25 Bettys with an escort of 26 Zeros. The American fighters shot down four Bettys but lost another three Wildcats and two pilots.

As the 11th Air Fleet swung into action, both sides were moving significant naval forces for what was certainly going to be a decisive battle. The Imperial Navy brought the larger force to the battle and as usual its ships were divided into a perplexing number of different task forces. The centerpiece was the large convoy of 11 transports escorted by 12 destroyers, which were staged at Shortland Island ready to make the transit to Guadalcanal. Supporting the convoy was a task force with battleships *Hiei* and *Kirishima*, escorted by one light cruiser and 11 destroyers, which was ordered to bombard the airfield on October 12. The 8th Fleet in Rabaul was poised to follow the battleship bombardment with its own heavy cruiser bombardment of the airfield the next night. For air cover of these task forces, the Japanese had only carrier *Junyo* available.

Halsey's response to the impending Japanese offensive was bold since it risked almost all of the Pacific Fleet's remaining strength. To preempt Japanese reinforcement efforts, the Americans moved two reinforcement convoys of their own to the island on November 12. The seven transports were escorted by two heavy and three light cruisers, and 13 destroyers. Operating to the southeast of Guadalcanal was a task force built around carrier *Enterprise*, battleships *Washington* and *South Dakota*, three cruisers, and eight destroyers.

The Japanese spotted the American convoys off Guadalcanal on the morning of November 12 and the 11th Air Fleet prepared a strike of 16 Bettys with torpedoes escorted by 30 Zeros. The Americans received adequate warning from a coast watcher and from radar and were able to get 20 Wildcats and eight P-39s airborne. The entire attack unfolded in only eight minutes from 1412 to 1420hrs. Just like during the August attack by Betty torpedo bombers, the large Japanese bombers flying at low level and bravely pressing home their attacks paid a very high price. The American transports and escorts were deftly handled to spoil an attempted pincer attack by the Japanese aircraft. The only major damage to any of the ships present was when a doomed Betty crashed on the stern of heavy cruiser *San Francisco*. For this minor success 11 of the Bettys were destroyed along with one Zero. The defending Wildcats lost three of their number with all the pilots surviving, and a single P-39 and its pilot was also lost.

Significant reinforcement reached Henderson Field the same day. Among these were the first eight P-38s; also arriving were six Wildcats, ten Dauntlesses of VMSB-142, and six Avengers of VMSB-131. Going into the decisive battle, the Cactus Air Force boasted 77 aircraft – 20 Wildcats, 18 P-39s, the eight newly arrived P-38s, 23 Dauntlesses, and eight

Attack on the *Hiei*

In a series of attacks on the damaged Japanese battleship *Hiei* on November 14, the Americans succeeded in sinking the first Japanese battleship of the war. The relays of attacks began at 0615. This scene depicts the attack of six VT-10 TBF Avengers from carrier *Enterprise* at 1435hrs. The torpedo bombers were escorted by 14 Wildcats, which supported the Avengers by conducting strafing attacks on *Hiei* to suppress her antiaircraft fire. The six Avengers broke into two groups with three aircraft attacking from each bow of *Hiei*, which was moving at three knots. All of the Avengers dropped their torpedoes. The starboard-side group scored two hits, one amidships and one on the battleship's stern. The hit on the stern was critical since it eradicated the progress the Japanese had made on repairing the damage to *Hiei*'s steering equipment. All of the port-side torpedoes were observed to hit their target, but only one of the unreliable Mark XIII torpedoes was observed to explode. Shortly after this attack, the battleship's crew was ordered to abandon ship. *Hiei* foundered that night.





Jim Laurier

Avengers. In addition to the B-17s on *Espiritu Santo*, there were now two squadrons of B-26 medium bombers fitted out to carry torpedoes.

While Cactus Air Force fighters were savaging the torpedo-laden Bettys, other aircraft from Guadalcanal spotted the large convoy after it left Shortland, which left little doubt about Japanese intentions. The more immediate threat was the battleship bombardment force which was spotted north of Guadalcanal headed south at 25 knots. With the *Enterprise* task force too far away to intervene, the only forces available to disrupt the Japanese battleship bombardment were the escorts from the convoys. The Americans gathered two heavy cruisers, three light cruisers, and eight destroyers for the critical, and seemingly hopeless mission of turning away the larger Japanese force built around two battleships. The Japanese did not expect the Americans to fight a night battle and expected the bombardment of the airfield would not be opposed. Rear Admiral Daniel Callaghan led the USN task force with orders to stop the battleship bombardment – the fate of Henderson Field was in the balance.

The resulting encounter was the most vicious night battle of the war. It was fought at close range with almost no command and control exercised by either side. Of the 27 ships engaged, few emerged undamaged. The Americans took the worst of it but concentrated on the leading Japanese battleship, *Hiei*, the flagship of Vice Admiral Abe Hiroaki. The Japanese force was scattered and, with his flagship damaged and out of the fight, Abe canceled the bombardment at about 0200hrs on November 13. As dawn emerged, several ships were scattered around Iron Bottom Sound in various states of damage. Among these was *Hiei*, which had suffered an enormous number of hits and had her steering gear knocked out and speed reduced to ten knots. In this condition, she was limping north out of the battle area.

The failure of the battleship bombardment forced Yamamoto to move the arrival of the convoy back to November 14. This left both the Japanese and Americans to focus on the wounded *Hiei* whose fate hung in the balance. Her prospects for survival took a turn for the worse when at about 0600hrs flooding forced the manual steering compartment to be abandoned. The battleship was now circling just off Savo Island.

The Japanese made efforts to provide the crippled battleship with air cover during the day with 23 Zero sorties from *Junyo* and 12 from the 11th Air Fleet. Three of these were lost to Wildcats, and another eight were lost operationally. They accomplished little, having shot down a single Wildcat while failing to protect *Hiei*. The Americans flew 70 sorties against *Hiei* during the day, most by the Cactus Air Force. The relentless assault began at 0615hrs when five Marine Dauntlesses and four Marine Avengers claimed a bomb and a torpedo hit. From 0830 to 1005hrs, seven more Dauntlesses attacked without success. Minutes later, the four Marine Avengers returned and claimed another torpedo hit. This was followed immediately by an attack from nine Avengers from *Enterprise*'s VT-10 escorted by six Wildcats. The Navy pilots claimed another three torpedo hits. Next up were 14 B-17s

On the night of November 12–13, a large Japanese surface force led by battleship *Hiei*, shown here in July 1942, was bearing down on Henderson Field to deliver what the Japanese hoped would be a crippling bombardment of the airfield. The Japanese task force ran into an outgunned USN task force. In the most epic naval night battle of the war, the Japanese task force was turned away. *Hiei* was damaged and was unable to withdraw out of range and was sunk by a Cactus Air Force strike the following day. (Naval History and Heritage Command)





just after 1100hrs, which dropped 56 500lb bombs on the staggering battleship claiming a single hit. This was followed by six Dauntlesses, which claimed as many as three hits.

After noon, six Avengers returned and claimed one torpedo hit and a second probable hit. After weather spoiled the next attack by nine Dauntlesses, six VT-10 Avengers claimed two more torpedo hits at 1435hrs. These hits were confirmed by Japanese sources and proved calamitous since one was on the stern, which wrecked all the progress the crew had made trying to repair the steering gear. With this, the crew was ordered to abandon ship. *Hiei* foundered that night and 300 of her crew were lost. She was the first Japanese battleship lost during the war.

In the aftermath of the defeat of their battleship bombardment, the Japanese came up with a revised plan to neutralize the Cactus Air Force. The new plan called for battleship *Kirishima* to conduct the bombardment on the night of November 14–15 with a strengthened escort of two heavy and two light cruisers, and nine destroyers. Halsey was forced to respond with the only ships he had left – two battleships escorted by a scratch force of four destroyers. Employing the battleships at night in the torpedo-infested waters off Guadalcanal was a major risk that Halsey decided he had to take.

In the meantime, the Americans had nothing available to contest the Japanese cruiser bombardment of Henderson Field scheduled for the night of November 13–14. The heavy cruisers *Maya* and *Suzuya* conducted the bombardment beginning at 0130hrs on November 14 virtually unopposed. The bombardment was a failure since the 989 8-inch shells missed Henderson Field and hit Fighter One instead. Only two Wildcats and a Dauntless were destroyed.

Retribution by the Americans was swift. The morning search from Henderson Field found the retreating cruisers and a strike of five Marine Dauntlesses, three Marine Avengers, and three Navy Avengers covered by eight Wildcats was dispatched. Despite claims of several hits, none of the Japanese ships was hit. Dive-bombers from *Enterprise* followed with a series of attacks beginning at about 0930hrs. The first attack by a pair of Dauntlesses hit heavy cruiser *Kinugasa*, which had been part of the covering force for

After an unsuccessful bombardment during the opening hours of November 14, the Cactus Air Force hit a Japanese cruiser force south of New Georgia. This is heavy cruiser *Suzuya* as seen from an American Avenger. The American aviators sent heavy cruiser *Kinugasa* to the bottom and damaged another two heavy cruisers. Inexplicably, even with this evidence of Henderson Field's operational status, Yamamoto sent his transport convoy south toward Guadalcanal and destruction. (Naval History and Heritage Command)



Cactus Air Force ●

- A. Raid 1: 2x VS-10 Dauntlesses
- B. Raid 2: 1x 98th Bomb Squadron B-17
- C. Raid 3: 19x Dauntlesses (8x from VMSB-132, 8x from VMSB-142, 3x from VB-10); 7x VT-10 Avengers; 8x VMF-112 Wildcats; 4x 67th Fighter Squadron P-39s
- D. Raid 4: *Enterprise* strike (12x VF-10 Wildcats, 8x Dauntlesses (5x from VB-10, 3x from VS-10))
- E. Raid 5: 5x Dauntlesses (3 VS-10, 2 VMSB-132)
- F. Raid 6: 8x VS-10 Dauntlesses; 8 Wildcats (6 from VF-10, 1 from VMF-112, 1 from VMF-122)
- G. Raid 7: 7x 26th Bomb Squadron B-17s
- H. Raid 8: 8x 72nd Bomb Squadron B-17s
- I. Raid 9: 7x VB-10 Dauntlesses
- J. Raid 10: 17x Dauntlesses (9x from VMSB-132, 2x from VMSB-141, 5x from VMSB-142, 1x from VS-10); 3x VT-10 Avengers; 14x Wildcats (8x from VMF-112, 6x from VMF-121)

Japanese Forces ●

- 1. Japanese convoy (11 transports and 12 destroyers)
- 2. CAP 1: 6x Zeros from 204 Air Group
- 3. CAP 2: 6x Zeros from *Hiyo*
- 4. CAP 3: 6x Zeros from 253rd Air Group
- 5. CAP 4: 6x Zeros from 252nd Air Group
- 6. CAP 5: 8x Zeros from 582nd Air Group
- 7. CAP 6: 6x Zeros from *Hiyo*
- 8. CAP 7: 6x Zeros from 204th Air Group
- 9. CAP 8: 8x Petes from R Area Air Force

The destruction of the November convoy

EVENTS

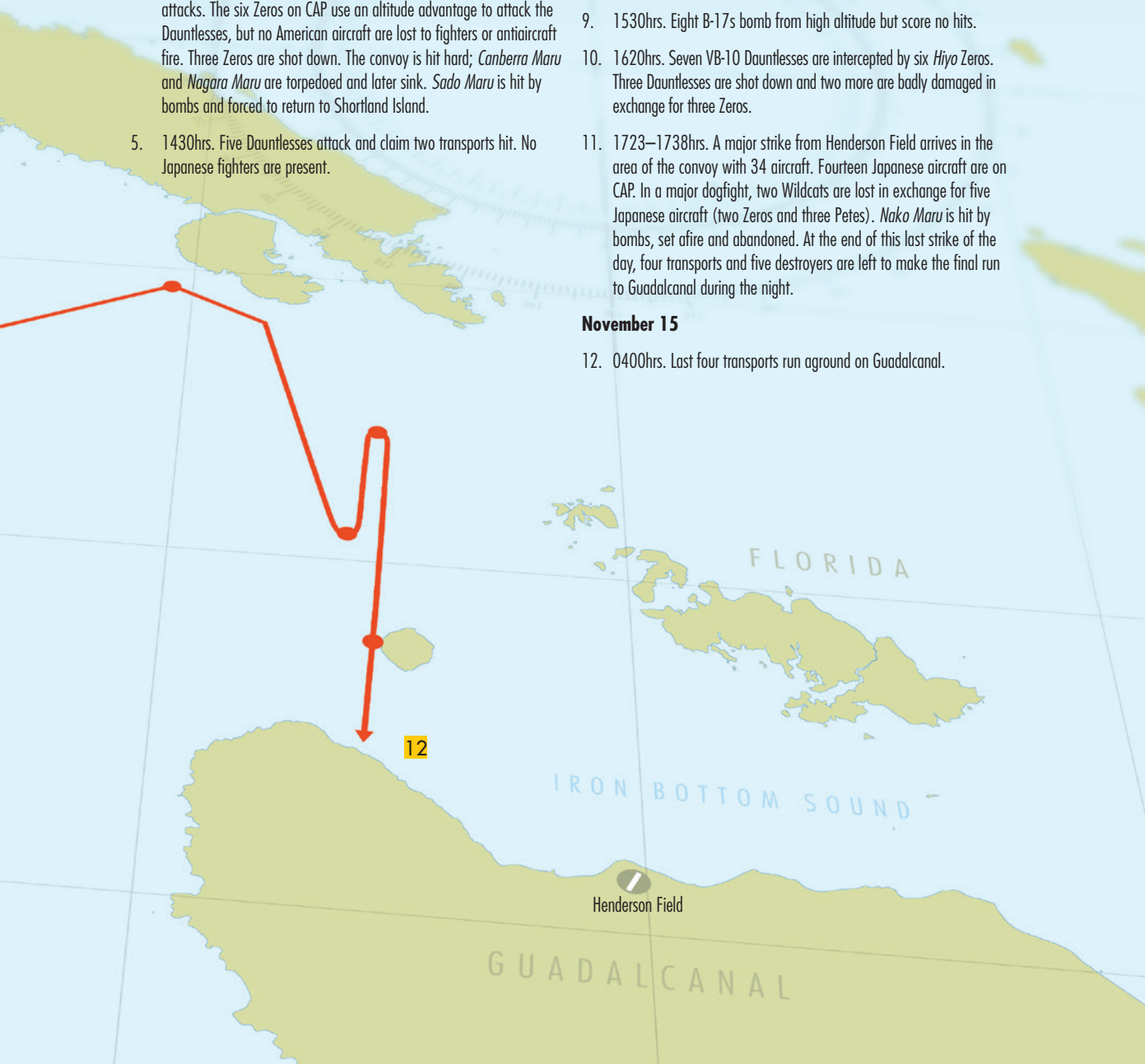
November 14

1. 0700hrs. A Dauntless from VMSB-132 spots the Japanese convoy 150 miles from Guadalcanal.
2. 0900hrs. Two Dauntlesses from VS-10 launch the first attack on the convoy. Both miss; the Japanese CAP shoots down one Dauntless and a Zero is also lost.
3. 0930hrs. One B-17 arrives over the convoy and is engaged by the defending CAP. The B-17 and the intercepting Zeros are undamaged.
4. 1250–1302hrs. A large strike of 38 aircraft from Henderson Field attacks. The six Zeros on CAP use an altitude advantage to attack the Dauntlesses, but no American aircraft are lost to fighters or antiaircraft fire. Three Zeros are shot down. The convoy is hit hard; *Canberra Maru* and *Nagara Maru* are torpedoed and later sink. *Sado Maru* is hit by bombs and forced to return to Shortland Island.
5. 1430hrs. Five Dauntlesses attack and claim two transports hit. No Japanese fighters are present.

6. 1450hrs. More dive-bombers arrive and claim three hits on different transports. *Brisbane Maru* is damaged by this or the previous strike and later sinks. No Japanese CAP is present.
7. Approximately 1450hrs. Seven B-17s arrive over the convoy and are engaged ineffectively by Japanese CAP. The B-17s claim a possible hit, but no Japanese ships are damaged.
8. 1530hrs. *Enterprise's* strike arrives and lines up to attack the convoy from astern. Four Zeros intercept; two are shot down for no American losses. The three VS-10 dive-bombers hit *Shinanogawa Maru* and *Arizona Maru*. Both are abandoned and later sink.
9. 1530hrs. Eight B-17s bomb from high altitude but score no hits.
10. 1620hrs. Seven VB-10 Dauntlesses are intercepted by six *Hiyo* Zeros. Three Dauntlesses are shot down and two more are badly damaged in exchange for three Zeros.
11. 1723–1738hrs. A major strike from Henderson Field arrives in the area of the convoy with 34 aircraft. Fourteen Japanese aircraft are on CAP. In a major dogfight, two Wildcats are lost in exchange for five Japanese aircraft (two Zeros and three Petes). *Nako Maru* is hit by bombs, set afire and abandoned. At the end of this last strike of the day, four transports and five destroyers are left to make the final run to Guadalcanal during the night.

November 15

12. 0400hrs. Last four transports run aground on Guadalcanal.



the bombardment, and caused heavy damage. Another pair of dive-bombers near-missed *Maya*, and when antiaircraft fire hit one of the Dauntlesses, it crashed on *Maya* killing 37 of her crew. Between 1045 and 1100hrs, 17 more Dauntlesses hit the retreating cruisers. Several near misses on *Kinugasa* caused more flooding and the cruiser capsized at 1122hrs with the heavy loss of 511 of her crew. Other near misses damaged heavy cruiser *Chokai* and light cruiser *Isuzu*.

The costly failure of the cruiser bombardment was just the beginning of the unraveling of the Japanese plan. Yamamoto ordered the convoy to depart Shortland on the afternoon of November 13 even though the sinking of *Kinugasa* provided ample proof that Henderson Field was not suppressed. The first serious attack on the convoy developed at 1250hrs when 19 Dauntlesses and seven VT-10 Avengers from Henderson Field arrived. One Avenger struck a transport which later sank and bombs sank another transport and damaged another forcing it to head back to Shortland. A second strike from Henderson Field included 13 Dauntlesses with another eight from *Enterprise*. At 1430hrs, these bombed another transport which caught fire and sank. The dive-bombers were followed by two groups of B-17s. The first group of seven attacked at 1500hrs but all its bombs missed. A second group of eight attacked at about 1515hrs but also failed to hit.

The next strike of the day came from *Enterprise* and consisted of eight Dauntlesses escorted by 12 Wildcats. The dive-bombers had orders to damage as many transports as possible and then recover on Guadalcanal. The Navy dive-bombers damaged another two transports at about 1530hrs, which were later abandoned.

The ground crews at Henderson Field worked furiously to re-arm and refuel aircraft as quickly as possible and were able to mount three more strikes, which struck the convoy between 1610 and 1730hrs. The first was composed of five Marine Dauntlesses and three Avengers with bombs. These were followed by a mixed group of eight Navy and Marine Dauntlesses and finally by another seven *Enterprise* Dauntlesses. Against increasingly effective cover provided by Zeros and Petes, another transport was sunk.

Though the Japanese fighters did savage the last group of *Enterprise* dive-bombers, shooting down three and forcing two to turn back, their overall defense of the convoy was ineffective. During the entire day, only 36 Zero sorties were made by the 11th Air Fleet supported by

Augmenting the Cactus Air Force during the climactic November battles was Carrier Air Group 10 from carrier *Enterprise*. The air group operated from Henderson Field from November 13 to 16 and played a critical role in strikes against battleship *Hiei* and the transport convoy during this period. This is *Enterprise* photographed immediately after the battle on November 21 in Noumea. (Naval History and Heritage Command)





14 R Area Air Force Petes. The cost for sinking six transports and damaging another was a mere five *Enterprise* Dauntlesses and two Marine Wildcats. Nine Zeros were shot down trying to defend the convoy. The convoy commander considered suspending the operation, but Yamamoto ordered him to press on to Guadalcanal.

Now, with the convoy already shattered, the second attempt to obliterate Henderson Field with a battleship bombardment went forward. The force led by battleship *Kirishima* ran into Halsey's two battleships in the opening minutes of November 15. The American destroyer screen was quickly shattered, and *South Dakota* was crippled by electrical outages and shell damage, but *Washington* single-handedly won the battle using her radar-guided 16-inch gun battery to turn *Kirishima* into a wreck. Remarkably, none of the dozens of torpedoes fired at *Washington* found its mark. *Kirishima* sank at 0425hrs. The Japanese operation to shell Henderson Field was a complete failure.

The last four Japanese transports were beached at 0400hrs and unloading hastily begun. At dawn, Cactus Air Force aircraft went to work and sank the four transports and destroyed most of the supplies still on the beach. The first to strike were eight Marine Dauntlesses followed by three *Enterprise* dive-bombers and four VT-10 Avengers. Fifteen more dive-bombers pummeled the transports before 0845hrs. The work of finishing off the transports and the supplies ashore was completed by shore batteries and a destroyer.

The fate of Henderson Field and the Cactus Air Force was decided not only by its fighters and strike aircraft. Defense of the airfield was also dependent on the USN to protect it against night bombardment by IJN heavy cruisers and battleships. This was never more evident than on the night of November 14–15 when battleship *Washington*, shown here in August 1942, defeated the last attempted Japanese battleship bombardment by single-handedly sinking battleship *Kirishima*. (Naval History and Heritage Command)

The Japanese reconsider their commitment

The failure of the November convoy was the decisive point in the campaign. It forced the Japanese to reconsider whether they could sustain their commitment to recapture the island. Meanwhile, the supply status of the garrison on Guadalcanal became a pressing concern. The Cactus Air Force was able to turn from its defensive stance to a more offensive one in which it stepped up efforts to blockade supplies to the Japanese on the island.

The state of the Japanese troops on the island became desperate as food was increasingly insufficient. The Imperial Army and Navy were criminally negligent by throwing a large number of men on Guadalcanal while making no plans to resupply them. Resupply of the



One of the four transports to run itself aground near Tassafaronga at about 0400hrs on November 15 was *Hirokawa Maru*. This is the transport after the Americans occupied the island in February 1943. (Naval History and Heritage Command)

17th Army became an urgent issue on November 16 as the Japanese front lines began to crumble. The effects of the Cactus Air Force's blockade were dramatic. Of the approximately 6,000 men of the 38th Division, a mere 250 were capable of anything like full combat duty. The condition of the 2nd Division which had been on the island longer was even more dire with only 100–200 men capable of front-line duty.

Because of the efforts of the Cactus Air Force and the current cycle of moonlit nights, the IJN was forced to cancel Tokyo Express runs. In its place, the Imperial Navy began using submarines to bring in food. Into early December, 16 subs each carried 20–30 tons of supplies to Guadalcanal. This was an even more inefficient method than using destroyers and consequently proved insufficient, so the Tokyo Express was brought back into operation. To reduce the unloading time for the destroyers, food and other supplies were put into half-filled drums. Each destroyer carried 200–240 drums, which were thrown overboard in clusters and then pulled ashore.

This method was introduced in the first of five scheduled runs on the night of November 30. On this night, eight Japanese destroyers were met by an American force of five cruisers and six destroyers. Though thoroughly outgunned and without radar, the Japanese pummeled the American force with torpedoes, sinking one cruiser and heavily damaging another three. In return the Japanese lost a single destroyer and were unable to deliver the needed supplies. The next run on November 3 was met by the Cactus Air Force with eight Dauntlesses and seven Avengers. The R Area Air Force tried to protect the destroyers with a dozen Petes, but these suffered heavily at the hands of escorting Wildcats, losing

five. The strike aircraft could damage only one destroyer at the cost of one Dauntless and one Avenger. Of the 1,500 drums unloaded, only 310 reached shore after Cactus Air Force aircraft had finished strafing everything in sight. The third Tokyo Express run using the drum method occurred on December 7. Thirteen Dauntlesses of VMSB-132 caught the destroyers at dusk and forced four to return before dropping their drums. The other eight pressed on to Guadalcanal but were attacked by PT boats, which prompted their commander to abandon the mission.

The minimal success of these three runs prompted the Imperial Navy to order a cancelation of all future destroyer runs. The Imperial Army did not take this well since it meant that the men on Guadalcanal were condemned to starvation. The Imperial Navy agreed to one more supply run to the island. This occurred on December 11 when 11 destroyers left Shortland and headed south. Fourteen Dauntlesses attacked the force just before 1900hrs but failed to hit a single ship and lost one dive-bomber in the process. The Japanese continued to Guadalcanal where they dropped 1,200 drums but paid a high price by losing a new destroyer to PT boats. This was the last time the IJN entered the waters off Guadalcanal in 1942.

Both sides were planning for a major offensive in January. To lay the foundation for this, the Japanese conducted a major reinforcement of the 11th Air Fleet to bring the strength at the end of December to 168 Zeros and 100 Bettys. In addition, the Imperial Army agreed to support the renewed attack with elements of its Air Force. The 6th Air Division was slated to begin arriving on December 18 and planned to have 110 aircraft in place before January.

By this time, both the Imperial Army and Imperial Navy had lost confidence in their ability to bring the campaign to a successful conclusion. Imperial General Headquarters agreed to withdraw from Guadalcanal on December 26 and the Emperor approved this dramatic turnaround on December 31.

Yamaura Maru was another of the four transports run aground near Tassafaronga early on November 15. This is the transport pictured after the campaign. (Naval History and Heritage Command)





This is the hulk of *Kinugawa Maru*, which was captured after the Americans secured Guadalcanal in February 1943. The transport was one of the four to make it to the island on November 15 only to be beached and then destroyed by American aircraft. Note the 75mm anti-aircraft guns fitted forward. (Official Marine Corps photo courtesy of Marine Corps History Division)

To prepare the garrison for its withdrawal, the IJN was forced to resume Tokyo Express runs. The first of 1943 was conducted on January 2 when ten destroyers left Shortland with food and ammunition. Attacks by the Cactus Air Force damaged a single destroyer and only five days' worth of supplies was delivered. The next run on January 10 with eight destroyers got only 30 tons of supplies to the garrison. On January 14 the Tokyo Express delivered written orders for the withdrawal from the island and a battalion of troops to act as the rear guard.

To support the evacuation, the 11th Air Fleet planned to conduct daylight attacks on Henderson Field on January 25, 27, and 30 and a series of night harassment raids. The January 25 raid featured used the old tactic of using Bettys to draw up the American fighters. The 18 Bettys turned away leaving 58 Zeros to reach Guadalcanal at 1340hrs. The Cactus Air Force could intercept with only eight Wildcats and six P-38s. For no cost to themselves, the Americans accounted for four Zeros and damage to six more. On the 27th, the Imperial Army made its first appearance over Guadalcanal. The 6th Air Division put up nine Kawasaki Ki-48 "Lily" light bombers escorted by a huge force of 74 Nakajima Ki-43 "Oscar" fighters, the Imperial Army's equivalent to the Zero. The large raid was greeted by 12 Wildcats, six P-38s, and ten P-40s. Seven American fighters were lost for six Oscars. The planned raid on January 30 was canceled.

The last stage of the campaign was the Japanese evacuation of the garrison. Despite predictions of heavy losses, the Imperial Navy made a total of 58 destroyer runs to the island on February 1, 4, and 7. For the loss of a single destroyer, the Japanese saved 10,652

emaciated survivors. Operation *KE* was well planned and executed by the Japanese. The 11th Air Fleet focused on protecting the evacuation runs and attacking USN units at sea which could threaten the evacuation. On February 1, the IJA's 6th Air Division returned to Guadalcanal with six Lily bombers and 23 Oscars. The same day, Vals from Buin sank an American destroyer off Savo Island.

The first evacuation run was opposed by 92 Cactus Air Force aircraft, which attacked the 19 destroyers in two groups. The Americans claimed one destroyer sunk, several damaged, and 17 Zeros shot down. In fact, only a single destroyer was damaged. At midnight, six Dauntlesses conducted an attack, which hit nothing. The February 4 run was conducted by 20 destroyers. Beginning just before 1600hrs, the Cactus Air Force attacked with 33 dive-bombers and torpedo planes escorted by 41 fighters. The 29 Zeros did a good job defending the destroyers and shot down 11 American aircraft. One destroyer was near-missed and forced to return to Shortland. Over Henderson Field that night, seven Bettys tried to keep the Cactus Air Force grounded by dropping bombs and flares. The final evacuation run on February 7 featured 18 destroyers. Only 36 American aircraft from Henderson Field attempted to interfere. A heavy escort of 49 Zeros was provided for the final run to Guadalcanal, and of these 17 intercepted the American strike. One destroyer was damaged enough that it had to return. Air losses were only one Zero and a single Wildcat.

During the final part of the campaign, from January 25 to February 9, losses in the air were almost equal. The Japanese lost 56 aircraft (including 12 IJA Oscars) and the Americans 53. The Cactus Air Force was unable to disrupt the Japanese evacuation, but Guadalcanal was secured by the Americans on February 9.

The last of the four transports to make it to Guadalcanal was *Yamatsuki Maru*, which was beached on Aruligo Point. At daylight, the beached transport was destroyed by American aircraft. This is the hulk after it was photographed by American personnel in February 1943. (Naval History and Heritage Command)





ANALYSIS AND CONCLUSION

A Dauntless dive-bomber over burning Japanese transports on November 16. The destruction of the 11-transport convoy marked the last Japanese attempts to move reinforcements to the island. Only four of the transports made it to Guadalcanal where they were all swiftly dispatched by the Cactus Air Force. Three of the transports are seen burning in this view. (Official Marine Corps photo courtesy of Marine Corps History Division)

The first American offensive of the Pacific War came eight months to the day after the war began on December 7, 1941 at Pearl Harbor. When American Marines stormed ashore at several points in the southern Solomons in the South Pacific on August 7, 1942, it was the start of an epic struggle between Japan and the United States which would last over six months and would feature an almost unrelenting succession of air, naval, and ground battles. At the end of the campaign, Japanese air and naval forces had suffered heavy attrition which was clearly beyond their ability to withstand. The enormity of Japanese losses, including 18 major surface combatants and hundreds of naval aircraft, makes Guadalcanal the decisive campaign of the Pacific War.

The campaign revolved around possession of Henderson Field. As long as the Americans kept the airfield operational and stocked with aircraft, the Japanese could never move enough troops and equipment to recapture the island. Realizing this, the Japanese made every effort to neutralize the Cactus Air Force. The 11th Air Fleet was assigned this mission, but consistently fell short over almost three months of sustained combat. Ironically, the only weapon able to neutralize the airfield for any period was the Imperial Navy's fast battleships dating from World War I.

From September 27 until October 26, the period of the heaviest air action during the campaign, the balance of the air war turned against the Japanese. The Cactus Air Force claimed 113 Zeros, 72 Bettys, ten Vals, eight Kates, three float Zeros, and 22 other biplane floatplanes. This total of 228 aircraft was an exaggeration by about 100 percent, which was about normal. Actual 11th Air Fleet losses from all causes were 63 Zeros, 29 Bettys, six Vals, one recce plane, and four flying boats. Added to these losses were another 12 IJN carrier aircraft – two Zeros, one Val, and nine Kates. Also during this period, the R Area Air Force lost at least 16 aircraft. Japanese aircraft losses thus totaled 131. This was the high-water mark for the 11th Air Fleet. The heavy losses resulted in an overall loss of effectiveness and morale, which made the 11th Air Fleet a non-factor in the November battles.

Total losses from all causes for the 11th Air Fleet for the period from August 1 until November 15 totaled 241 (106 Zeros, 100 Bettys, 15 Vals, 19 flying boats, and one reconnaissance aircraft). The total losses in aircrew are unknown but were very high. Assuming none of the aircrew from the Zeros, Bettys, and Vals were rescued, aircrew losses would have totaled 836. Obviously, some aircrew did survive, but the majority did not, which made aircrew losses crippling. For example, one Japanese source stated that 104 Zero pilots of the 187 pilots engaged in operations from August 7 until November 15 were killed or captured. Another source indicated that during the same period IJN fighter pilot losses were 119, including those lost over New Guinea. Whatever the precise number, these losses broke the back of Japan's prewar pool of highly trained fighter pilots. By mid-1943, Japanese fighter pilots were going into combat with a minimum of flight training.

In comparison, American losses from September 27 until October 26 were much less – 103 in total. This included 43 Wildcats (27 shot down by Zeros), nine P-400s/P-39s (five lost to Zeros), 35 Dauntlesses (15 to Zeros), 15 Avengers (only one to Zeros), and one floatplane. When the Japanese made their last attempt to reinforce the island in November, the Cactus Air Force delivered a death blow to Japanese hopes for victory. Over the longer span of the campaign (August 7 until November 15), the Cactus Air Force lost 216 aircraft – 115 Wildcats, 66 Dauntlesses, 16 Avengers, 19 P-400s/P-39s. These figures include a high percentage of operational losses – 33 Wildcats, 22 Dauntlesses, seven Avengers, four P-400s/P-39s. This was due to the primitive nature of the airfields on Guadalcanal and the overall lower level of aircrew experience at the start of the campaign. Japanese losses to combat causes were higher than American losses. American losses in air combat totaled 109 – 70 Wildcats, 24 Dauntlesses, two Avengers, 13 P-400s/P-39s. Only 12 Wildcats, 20 Dauntlesses, seven Avengers, two P-400s/P-39s, and two B-17s were destroyed on the ground. Many of these were attributable to the battleship bombardment of mid-October. This clearly shows the ineffectiveness of the many months of bombing by Bettys.

Aircrew losses were also in favor of the Americans. During the six months of the campaign, the Marines bore the brunt of the air campaign. Eleven Marine squadrons operated from Guadalcanal with a total of 464 pilots. Of these, 94 were killed or missing, and 177 were evacuated for other reasons, mostly on account of wounds and sickness. The Marines made 2,117 sorties and claimed 427 Japanese aircraft, while losing 118 in combat and 30 operationally. In addition, a portion of the USAAF's aircrew losses of 150 and USN losses of 130 were suffered flying as part of the Cactus Air Force.

As the battle raged for control of the air space over Guadalcanal, there was a concurrent battle fought against Japanese efforts to bring men and supplies to the island. While the fighters from the Cactus Air Force more than held their own, the strike aircraft flying from Henderson Field provided the Americans with a decisive edge.

The presence of the Cactus Air Force forced the Japanese to use destroyers as the main method of moving men and supplies to the island. Though this method was fairly safe from air attack, it limited the number of troops that could be carried and how much of their equipment they could bring. This was a prime factor in the failure of the Imperial Army's



A common sight over Henderson Field during the summer of 1942 – a Betty coming down to earth after being gunned down by a Wildcat. American fighter tactics were designed to maximize attrition to the Japanese bomber force. (Naval History and Heritage Command)

attacks in August and September. In October, the Japanese stepped up their efforts to move a larger force to the island. From October 1 to 20, the Japanese succeeded in moving an impressive amount of men and equipment to Guadalcanal despite the best efforts of the Cactus Air Force. According to the IJN, they moved 9,091 Imperial Army troops, 66 guns and howitzers, 19 mortars, 12 tractors, and 160 tons of supplies to the island. This required 92 destroyer, seven cruiser, and four seaplane carrier runs. The Cactus Air Force damaged ten destroyers, three seriously. Additionally, the High-Speed Convoy moved another 4,500 men to the island. This brought total Japanese manpower on Guadalcanal to over 14,000. To put this in perspective, in late October there were 23,088 American troops on Guadalcanal and another 4,639 on Tulagi. The Japanese lost the reinforcement battle.

The failure of the Japanese November convoy was the turning point of the campaign. Ten transports were lost for the movement of only 2,000 men and a meager amount of supplies. Yamamoto understood the central role of Cactus Air Force and made neutralization of Henderson Field a key premise of his November offensive. Because of the inability of the 11th Air Fleet to defeat the Cactus Air Force, Yamamoto was forced to repeat the battleship bombardment which had proved so successful in October. This was thwarted by the sacrifice of Rear Admiral Callaghan and his outnumbered force and Halsey's bold action to send his battleships into the confined waters of Iron Bottom Sound at night. These actions saved the airfield from a potentially devastating bombardment. The aviators from Henderson Field proceeded to finish off battleship *Hiei* and savage the convoy. The importance of *Enterprise's* air group cannot be forgotten since, at the start of the battle, Cactus Air Force only had 31 strike aircraft. Air Group 10 added 31 dive-bombers and nine Avengers, which accounted for heavy cruiser *Kinugasa* and assisted in the destruction of *Hiei* and the convoy.

The overall performance of the Japanese in November was amazingly weak. They outnumbered the Americans at sea and the 11th Air Fleet was larger than the Cactus Air Force. But Yamamoto was as tentative as Halsey was ruthless. Of note was Yamamoto's inexplicable decision to send the convoy to its virtually assured destruction before he had guaranteed the neutralization of the Cactus Air Force.

A destroyed Wildcat is pictured in front of one of the flimsy hangars built by the Japanese. Despite the many raids by Bettys, the Americans lost very few aircraft to bomb damage during the campaign. (Official Marine Corps photo courtesy of Marine Corps History Division)





The Cactus Air Force emerged victorious for several reasons. The IJN's 11th Air Fleet proved to be a blunt instrument. The Japanese had a numerical superiority throughout the battle but this never mattered. The fact that they accepted battle from a base 565 miles away had tremendous consequences. It meant that their tactics became predictable – one raid a day at noon. It also meant that a large percentage of the Zero force could not even be employed. The long trip down and back reduced the effectiveness of the force over time because of the resulting drain on the air and maintenance crews. Another effect was that any damaged aircraft were unlikely to return to Rabaul. The vaunted Zero and the Imperial Navy's best fighter pilots were bested by Marine and Wildcat pilots using superior tactics and excellent deflection shooting. A forgotten key to this victory was the continual ability of the slow-climbing Wildcats to gain a height advantage, which was only possible because of radar and timely coast watcher reports. As the Zeros struggled to protect the Bettys, the inaccuracy of the Japanese bombers made it impossible for them to deliver a crushing blow against the Cactus Air Force on the ground.

The presence of the Dauntlesses on Guadalcanal shaped the nature of the entire campaign. They forced the Japanese to rely on destroyer runs, which limited the size and characteristics of the force they could place on Guadalcanal. With any build-up so constricted, it was unlikely that the Japanese could ever assemble enough combat power to take the airfield. Suppressing the airfield was a problem the Japanese could never solve and highlighted the shortcomings of the 11th Air Fleet. The conundrum of not being able to suppress the airfield, which meant that a land attack would not be capable of taking the airfield until the airfield was suppressed, proved insoluble for the Japanese.

Ground personnel extinguish flames in a Wildcat which has just been pulled out of a hangar. The remarkably low total of 12 Wildcats was destroyed on the ground during the entire campaign. (Official Marine Corps photo courtesy of Marine Corps History Division)

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INDEX

Note: page locators in bold refer to illustrations, captions and plates.

- Abe, Vice Adm Hiroaki 80
 ace pilots 12, 20, 21, 27, 28, 29, 43, 69
 air defense 24–27, 25, 26, 27, 44, 44, 53, 73
 air raid warning alarm 24
 air tactics 28–30, 29, 32, 40, (45)46–47, 93
 dive-bombing tactics 28, 29, 30
 aircraft 19, 20, 21, 53
 Aichi Type 99 D3A1 “Val” dive-bomber (IJN) 17, 28, 42, 44, 52, 69, 72, 73, 74, 77, 89, 90, 91
 Bell P-39 Airacobra fighter plane (US) 60, 61, 62, 63, 64, 65, (65)66–67, 68, 69, 72, 76, 77, 91
 Boeing B-17 bomber plane (US) 21, 42, 51, 60, 64, 68, 69, 80–81
 Douglas SBD Dauntless dive bomber (US) 7, 19, 20, 23, 24, 28–30, 31, 36, 43, 49, 50, 51, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65, (65)66–67, 68, 69, 73, 75, 76, 77, 80, 81–84, 85, 86, 87, 89, 90, 91, 92, 93
 Grumman F4F Wildcat fighter plane (US) 4, 5, 11, 13, 19, 20, 21, 21, 22, 22–23, 24, 26, 27, 27, 28, 30, 40, 42, 43, 44, (45)46–47, 48, 49, 51–52, 52, 53, 54, 55–56, 57, 58, 59, 60, 61, 62, 63, 64, 65, (65)66–67, 68, 69, 72, 73, 76, 76, 77, (77)78–79, 80, 81, 86, 88, 89, 91, 92, 93, 93
 Grumman TBF-1 Avenger torpedo bomber (US) 21, 23, 24, 49, 54, 57, 58, 59, 60, 62, 64, 69, 76, (77)78–79, 80, 81, 81, 84, 85, 86, 91, 92
 Kawasaki Ki-48 “Lily” bomber plane (IJN) 88, 89
 Marine RF4D cargo plane (US) 33, 33
 Mitsubishi A6M Zero fighter plane (IJN) 4, 5, 13–14, 16, 16, 23, 28, 40, 43, 44, (45)46–47, 48, 50, 51, 52, 53, 54, 55, 56, 58, 59, 62, 63, 64, 65, 69, 73, 74, 77, 84, 85, 87, 88, 89, 90, 91, 93
 Mitsubishi F1M2 floatplane Model 11 “Pete” (IJN) 11, 65, 69, 76, 84, 85, 86
 Mitsubishi G4M1/2 “Betty” torpedo bomber (IJN) 13, 14, 14, 21, 23, 28, 42, 42, 43, 44, 44, 45, 48, 51, 52, 53, 54, 55, 58, 59, 60, 62, 63–64, 65, 68, 69, 72, 73, 76, 76, 77, 87, 88, 89, 90, 91, 92
 Nakajima A6M2-N floatplane “Rufe” (IJN) 42, 56, 75, 75, 76
 Nakajima Ki-43 “Oscar” fighter plane (IJN) 88, 89
 Nakajima Type 97 B5N2 “Kate” torpedo bomber plane (IJN) 50, 90
 P-400 fighter plane (US) 21, 22, 23–24, 50, 53, 54, 57, 62, 64, 91
 PBY Catalina search and rescue seaplane (US) 31, 45, 49, 51, (65)66–67, 68
 aircrew experience 17, 20, 21, 28, 32, 50, 75
 airfield construction on Guadalcanal 7, 9, 16, 45
 airfields and bases 14–17, 37
 American landings on Guadalcanal 9, 42, 43
 battle of Cape Esperance, the 10, 62
 battle of Midway, the 4
 battle of Santa Cruz, the 5, 10, 35, 36, 73
 battle of Savo Island, the 9, (45)46–47
 battle of the Coral Sea, the 6
 battle of the Eastern Solomons, the 10, 34, 48–51
 battle of the Tenaru River, the 10, 48
 Bauer, Lt. Col. Harold 28, 28, 29, 32, 69, 72
 “Bloody Ridge,” Guadalcanal 55, 56, 56
 Buin Airfield 16, 17, 52, 57, 62, 72
 Callaghan, Rear Adm Daniel 80, 92
 carrier losses 10, 20, 35, 36
 chronology of events 9–10
chutai aircraft battle groups 12, 14
 combat effectiveness and fatigue 32–33
 Cram, Maj Jack 65
 disease and diet 32
 dogfights (45)46–47, 52
 Espiritu Santo airfield 32, 33
 Fitch, Rear Adm Aubrey 18, 19, 69
 Fletcher, Vice Adm Frank 9, 49
 Foss, Capt Joe 20, 27, 64
 fuel tanks 13, 24, 31
 Galer, Maj Robert 20, 54
 Geiger, Brig Gen Roy S. 18–19, 24, 30, 54, 60, 65, 68, 74
 Ghormley, Vice Adm Robert L. 18, 19, 20, 40, 60
 Halsey, Vice Adm William F. 18, 19, 38–40, 74, 77, 81, 92
 Henderson Field 7, 9, 10, 21, 24, 24–27, 25, 26, 30, 31, 32, 34, 35, 36, 38, 39, 40, 57, 64
 Fighter One airstrip 31, 31, 64, 69, 73
 “High-Speed Convoy,” the 63–69, (65)66–67, 92
 Horikoshi, Jiro 13
 IJA (Imperial Japanese Army), the 4, 5, 35–38, 48, 57, 58, 63, 74, 85–86, 87
 6th Air Div 87, 88, 89
 17th Army 7, 86
 35th Infantry Bde 53, 55, 56, 56, 72
 IJN (Imperial Japanese Navy), the 4, 11, 17, 34, 35–38, 74, 87, 92
 11th Air Fleet 14–16, 17, 49, 51, 52, 58, 62, 74, 76–77, 85, 87, 90, 92, 93
 21st Air Flotilla 74
 25th Air Flotilla 11–12, 42, 57
 battleships 90
 Haruna 64
 Hiei 77, (77)78–79, 80, 80–81, 84, 92
 Kirishima 77, 81, 85, 85
 Kongo 64
 carriers
 Chitose 60, 62
 Hiyo 65, (65)66–67, 69, 73
 Junyo 65, (65)66–67, 69, 73, 80
 Nisshin 59, 60, 62, 65
 Ryujo 49, 50
 Shokaku 49, 53, 73
 Zuikaku 49, 53

- Combined Fleet 5, 6, 48–49, 58
- cruisers
 - Jintsu 51
 - Kinugasa 62, 81, 84, 92
 - Maya 81, 84
 - Suzuya 81, 81
- destroyers
 - Amagiri 59
 - Asagiri 53
 - Murakumo 62, 63
 - Mutsuki 51
 - Natsugumo 62
 - Shirakumo 53
 - Yugiri 53
- R Area Air Force 53, 61, 65, 74–75, 86, 90
- transport ships
 - Azumasan Maru 68
 - Hirokawa Maru 86
 - Kinugawa Maru 88
 - Kyushu Maru 68, 72
 - Sasago Maru (65)66–67, 68
 - Yamatsuki Maru 89
 - Yamaura Maru 87
- intelligence 6, 9, 24, 34, 49, 74
- Japanese attacks on Guadalcanal 42–57, 44, (45)46–47, 55, 70–71, 72–73, 75–77
 - and the November 1942 naval battle 10, 36, 76, (77)78–79, 77–81, 80, 82–83, 85
 - destruction of the November convoy 81–84, 82–83, 92
- Japanese evacuation 88–89
- Japanese landings on Guadalcanal 35, 38, 68, 74, 91–92
- Japanese naval strategy 4–5, 6–7, 12, 17, 34–35, 36–38, 44, 48–49, 53, 54, 57–59, 62, 63, 72, 74, 81, 90, 91–92, 93
 - after the November battle 85–87
- Japanese raid profiles 15
- Kawaguchi, Maj Gen Kiyotaki 53, 54, 55
- King, Adm Ernest 7–9
- Kusaka, Vice Adm Jinichi 13, 17, 60
- living conditions 32, 32
- logistics and cargo transport 33, 33
- losses 6, 9, 10, 17, 24, 35, 49, 50, 51–52, 54, 55–57, 58, 59, 61, 62, 64, 68–69, 73, 75, 77, 86–87, 89, 90–91, 92
- MacArthur, Gen Douglas 7
- maintenance and repairs 30, 31, 34
- maneuverability 13, 22
- Mangrum, Maj Richard C. 20, 21
- Marine Perimeter on Henderson airfield 39
- Marshall, Gen George 7
- McCain, Rear Adm John S. 18, 19, 45
- medals and awards 21, 27, 28, 69
- Nimitz, Adm Chester 6, 7, 9, 18, 19, 21
- Operation *Watchtower* (Aug 1942 – Feb 1943) 9, 18
- order of battle 41
- oxygen systems 23
- “Pagoda,” the 24, 30, 40
- Port Moresby 5–6
- RAAF (Royal Australian Air Force), the 12
- Rabaul island as a Japanese base 4, 6, 7, 11, 12, 15–16, 17, 35, 42–43, 52, 57, 58
- radar 26, 27, 49, 59, 62
- radio communications 13, 27
- range limitations 16, 52–53, 93
- reconnaissance 44, 50, 55, 56, 62, 73
- reinforcement battles 38, 92
- reinforcements and restructuring 57, 58, 60, 62, 63, 69, 74–75, 87, 90
- Rinosuke, Rear Adm Ichimaru 74
- Sakai, Saburo 12, 43, 44
- SLOCs (sea lines of communication) 4, 5, 7, 18, 19
- Smith, Maj John L. 20, 21, 28, 45
- Solomon Islands map 8
- speeds 13, 22, 24
- supply shortages 19, 85–87, 88
- Sutherland, Lt. James 43
- “Tokyo Express” destroyer runs 10, 28, 35, 51, 53, 54, 57, 58, 59, 59, 60–63, 61, 65, 69, 75, 75–76, 86–87, 88, 93
- training 17, 20, 32, 91
- Tsukahara, Vice Adm Nishizo 11, 49
- US Marines landing, Lunga Point 43
- US naval strategy 7–9, 18, 19, 28, 38–40, 49, 58, 85
- USAAF (US Army Air Force), the 12, 38
- 11th Bombardment Group (Heavy) 21, 42
- 13th Troop Carrier Sqn 33
- 67th Sqn 21, 22
- Cactus Air Force 10, 13, 16, 18, 20, 21, 21, 23, 28, 29, 34, 35, 36, 38, 49, 50, 50, 53, 55, 57, 59, 63, 65, 65, 70–71, 73, 88, 89, 90, 91, 92, 93
- USN (US Navy), the 6, 9, 38
- 3rd Defense Bn 26, 26, 27
- battleships
 - South Dakota 77, 85
 - Washington 77, 85, 85
- carriers
 - Enterprise* 20, 21, 38, 43, 49, 51, 73, 77, 80, 81, 84, 84
 - Hornet* 73
 - Long Island* 20, 48
 - Saratoga* 43, 49, 54
 - Wasp* 20, 21, 42, 43, 49
- cruisers
 - San Francisco* 76, 77
- destroyers
 - Calhoun* 53
- Marine Air Group 23 19
- Squadrons 33, 43
 - VF-5 43, 55, 56, 69
 - VMF-121 20, 27, 60, 62, 64, 65
 - VMF-212 32, 64, 69
 - VMF-223 19, 20, 21, 28, 45, 48, 54, 56
 - VMF-224 19, 20, 53–54, 56, 69
 - VMSB-132 20, 87
 - VMSB-141 20, 57, 64
 - VMSB-231 53, 69
 - VMSB-232 21, 48
 - VT-10 (77)78–79, 80, 81, 84, 85
- Vandegrift, Maj Gen Alexander 9, 18, 18, 19, 38
- warning systems 24, 27
- weaponry 11, 13, 14, 22, 23, 24, 27, 28, 44, 64
 - M1 90mm anti-aircraft gun 26, 27, 65
 - M2 .50-caliber machine gun 26, 27
- Woods, Brig Gen Louis E. 19, 74
- Yamamoto, Fleet Adm Isoroku 5, 6, 11, 12, 40, 58, 60, 62, 63, 69, 73, 80, 81, 84, 85, 92

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